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Cumberland & Westmorland etc.

(TRACT SERIES, No. VIII.)

8

Elizabethan Keswick

EXTRACTS FROM

THE ORIGINAL ACCOUNT BOOKS, 1564-1577,
OF THE GERMAN MINERS, IN THE
ARCHIVES OF AUGSBURG

TRANSCRIBED AND TRANSLATED BY

W. G. COLLINGWOOD, M.A., F.S.A.,

Editor to the Cumberland and Westmorland Antiquarian and
Archæological Society,

Author of "The Life of John Ruskin," etc.

Kendal
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Elizabetta's Book

EXTRACTS FROM

THE ORIGINAL ACCOUNT BOOKS 1564-1577,
OF THE GOLDEN MINERS OF THE
ARCHIVES OF APOCALYPSE

TRANSCRIBED AND TRANSLATED BY

W. G. COLEMAN, M.A., F.R.S.

Member of the Council of the Society of Antiquaries and
Antiquary of the Society of Antiquaries

London: Printed by the Society of Antiquaries, 1881.

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Elizabethan Keswick. Extracts from
the original account books, 1564-1577, of
the German miners, in the archives of
Augsburg. Transcribed and translated
by W.G. Collingwood. 1912

Vol. 8

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TITUS WILSON, PRINTER, KENDAL

PREFACE.

THE Settlement of German miners at Keswick during the reigns of Elizabeth, James I. and Charles I., and their works throughout the Lake District, have attracted the attention of several writers and roused the imagination of many readers. Extremely little has been known about them, and much of the matter printed on the subject has been inaccurate. This is all the more tantalizing because some of our older authors had before them a quantity of manuscript accounts, written by the Keswick Germans, from which, if they had cared to quote, they might have given us much interesting information.

The anonymous writer of a letter on the coppermines in 1684 (printed in *Philosophical Transactions*, 1693) referred to "Mr. Hextecher's book" which, at the time, was "in Mr. Anglionby's custody at Carlisle"; and Thomas Robinson in 1709 named "the chief steward of the work" as "one Heckstetter, who by his books of accounts, which are most regular and exact, and all on large imperial paper, as well as by other writings I found under his hand," says Robinson, "appears to have been a man of great learning as well as judgment in metals and minerals."

It occurred to me some time ago that, as the mines were financed by an Augsburg firm, there might still be discoverable among the records of Augsburg enough documents to help in the identification of the chief actors, if not fuller accounts; and I applied to Dr. P. Dirr, the keeper of the City Archives, for any information he could give. Dr. Dirr most kindly sent me a paragraph from Ehrenberg's "Das Zeitalter der Fugger" which mentioned the mines, and he gave some help towards elucidating the names of "Duchmen" which appear in grotesquely mangled forms in our Parish Registers. But he was unable at the time to do more; and I printed a short paper in the Cumberland and Westmorland Antiquarian Society's *Transactions* for 1910, in the belief that little further could be added to my analysis of the various local notices.

Shortly after the publication of that article, Dr. Dirr informed me of the discovery of original account books relating to the

business of David Haug, Hans Langnauer & Co., the firm in question. I was most courteously permitted the use of these valuable documents, and found that they far exceeded all possible expectations. Not only do they contain the business memoranda of the Germans from the start of the enterprise until it passed into other hands in 1577, but the actual "journals," written at Keswick, and full of details which almost amount to gossip.

Entered in the wordy and leisurely style of the ancient clerk, usually, though not always, in a beautiful, legible hand, and, of course, in old German, there are particulars of the various mines, stamps and smelting-furnaces, smithies and workshops, charcoal-burning and "stone-coal" pits, building, travelling, banking, trading, wages and prices, clothes and food, all the little things of daily life as well as the great concerns of a business which had Gloriana for its patron and Burghley for a shareholder. The German colonists, so puzzling to identify from the Parish Registers, are named in full; and it adds not a little to find the homes of the men—homes to which they now and then returned for summer holidays—to be places not unknown to lovers of Tyrol and the Eastern Alps. The English customers and purveyors of the firm include many names of families then founding in trade the fortunes they lost for King Charles; and most of the country folk, from Caldbeck and Bolton on the north to Calgarth and Coniston on the south, were in the employ of the great enterprise. The mere mention of their names and houses—at a time when many parishes kept no register,—the skippers and ports of ships plying between London and Newcastle—before the Armada,—the carriers by road up and down England, and the bare enumeration of commodities at a date when we have been accustomed to imagine the north, and especially these dales, as hardly emerging from mediæval rudeness—all these give historical value to the records. But I confess that to my mind the picture of domestic life—the workmen's bath, the masters' library, Mrs. Hechstetter's housekeeping, the Island garden, running the loads across the frozen lake, raising the boats after storm and flood, archery on St. George's day and numming at Christmas, copperbeating at Keswick three centuries before the School of Industrial Art, and charcoal-burning at Coniston where still, waking of nights, we smell the pitstead-reek, and all such touches of human and natural interest, as we know Nature and our neighbours at the Lakes, appeal to me more strongly.

"And I tell this tale, which is strictly true,
Just by way of convincing you
How very little, since things were made,
Things have altered in the building trade;"—

and in many another. And then, to think that, north and south of this busy craftsman's paradise, the Lord Warden was watching the fords for Armstrongs and Grahams, and Dissenters were burnt at Smithfield; northern lords who figure in these pages were stirring rebellion, and our miners on their summer trips to Tyrol ran the gauntlet through Alva's troops in the Low Countries! But business is business; and Ulrich Frass—who a little later invented the modern smelting-furnace—writes up the specification for the building of Keswick bridge or the dog's keep for the term, though Northumberland is beheaded, or Antwerp sacked.

Of the twelve volumes of manuscript accounts relating to the English business of Haug & Co., seven consist of "Journals" written at Keswick, sent sheet by sheet to Augsburg, and there bound up at the end of each year in neat vellum covers—all except the last two, which must have come to hand when the firm was in difficulties and on the point of giving up this too expensive work. The first, for 1569, contains 272 folios (double pages) of foolscap, and includes a recapitulation of certain entries for previous years. That for 1570 is wanting, but much can be supplied from accounts kept in London by Hans Loner, the London agent, and his clerk Hans Merer. The Keswick Journal for 1571 has 186 folios; but 1572 is again unrepresented except in the London books. For 1573 the Keswick Journal, of 122 folios, is pretty full, and those for 1574 and 1575 run to about the same length. By 1576 the lavish expenditure of earlier years was being curtailed; this Journal is rather shorter; and the series comes to an end in the middle of 1577. The other five volumes are those kept in London (one, a fair copy, perhaps made in Augsburg), and contain accounts of dealings with Haug and Co.'s branches in Venice and Antwerp, as well as with the head office, beside payments to Keswick, bills of exchange, purchases for the mines and miners, expenses of travellers and carriage by land and sea through London, sales of silver and copper raw and manufactured, and items of Loner's own life in London. A few loose sheets of letters are inserted, including one about the quicksilver mines of Idria from the Archduke Charles of Austria—Queen Elizabeth's suitor.

From this great wealth of material two different books could be compiled. One would be a history of the business in general ; the other, a selection of extracts illustrating the local and personal interest of the manuscripts. I am sincerely glad to be relieved of the former task by learning before it is too late that a general history of the mining enterprises of Haug & Co. is to be undertaken by Dr. Johannes Meilinger of Leipzig, who has already sketched the rise of the firm from 1531 and its trade in drapery and groceries before the date of this English adventure. This leaves me free to fill my pages with translated entries, omitting and condensing much that is irrelevant to my purpose, though it would be valuable in another connection. In the first chapter I have inserted from various sources a little extraneous matter that seems needed for explanation ; the rest of the book is simply a calendar of the manuscripts, undigested and very sparingly annotated. But in turning its pages, the reader may feel, I hope, that at last he is looking behind the veil which hitherto has hung over the Lake District and its life in the age of Elizabeth.

W. G. C.

Coniston, January, 1912.

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(The facsimiles are from photographs by R. G. Collingwood,
and the cuts from Paul Lacroix, "Moyen Age.")

ELIZABETHAN KESWICK.

THE GERMAN SETTLEMENT,

1564—1568.

THE Company or Society of Mines Royal was founded towards the end of 1564, as the outcome of several previous attempts to induce German experts to undertake the management of English metal working. In 1561 Mr. Thomas Thurland, Master of the Savoy, a clergyman* who had some knowledge of Germany and of mining, seems to have been the agent in this business; to him and to Johann Steinberger an indenture was granted by Queen Elizabeth for forming a company to work mines. But it was not until three years later that, on the request of Thurland, Sebastian "Spydell" and their partners, the grants were transferred to Daniel Hechstetter.† (September 10th, 1564. Calendar S.P.D., 1547-80.)

On December 10th, 1564, an indenture was made by the Queen on one part, and Thomas Thurland and Daniel Hechstetter on the other, by which these two were empowered to search, dig, try, roast, and melt all manner of mines and "ures" of gold, silver, copper, and quicksilver, in the counties of York, Lancaster, Cumberland, Westmorland, Cornwall, Devon, Gloucester, and Worcester, and in Wales. The Queen was to have one-tenth

* "Parson Thurland" is Cecil's endorsement of a letter from him (S.P.D.).

† Or, perhaps, more correctly Höchstetter, but he signs his name Hechstetter. Joachim Höchstetter was employed in a Scottish mining company in 1526; perhaps father of Daniel and of John and Joachim hereafter mentioned.

of native gold and silver, and one-tenth of gold and silver ore holding 8 lbs. weight in the cwt.; of every cwt. of copper, 2s., or one-twentieth during the first five years, and afterwards 2s. 6d. or one-fifteenth; "and too have the preferment in bying of all Pretious stones or pearl (!) to be found in the woorking of these mines;" also rights over tin and lead.

Daniel Hechstetter was acting as agent for David Haug, Hans Langnauer & Co., of Augsburg, already great dealers in silks, cloths, and draperies, in groceries and the spices of the East Indies, and like other wealthy business men of the time, in banking and bill discounting. They had widespread branches, reaching from Venice to Antwerp and from Cracow to Lyons; and though not originally interested in mines, they had recently taken over from the successor of the famous Augsburg house of the Fuggers the control of the copper mines of Neusohl in Northern Hungary. One of their branches was at Schwatz, in Tyrol, near Innsbruck, a celebrated mining centre, where silver, copper, and iron were produced; and we find by these account books that it was from Schwatz that some of the first miners were sent by them to England. For their earlier history see Dr. Meilinger's work, named in the Bibliography above.

The English records tell us that Hechstetter (July, 1565) offered to form a company and to give shares to Sir William Cecil, to the Earls of Pembroke and Leicester, Mr. Tamworth, and Alderman Duckett; the actual assignment of the 24 shares can be gathered from the account books, with the dates at which the shareholders entered the Company.* For the sake of convenience I have set out these statements in the following table:—

* The expenses of 1564-5 (see p. 5) were charged to the first nine shareholders, who must therefore have joined the Company as from its formation.

Shareholders in the Company of Mines Royal.	1564-5.	Feb. 1566.	Xmas, 1566.	Sept. 1567.	Nov. 1567.	May, 1568.	Feb. 1569.
Haug, Langnauer & Co., Augsburg ..	11	10½	10½	9½	9½	9½	9½
Sir Wm. Cecil (in 1571 Lord Burghley) ..	2	2	2	2	2	2	1
Thomas Thurland, Master of the Savoy ..	2½	1½	1½	1½	1½	1½	2½
Edmund Thurland	1	1½	1½	1½	1½	1½	1½
Roger Wetheral	1½	1½	1½	1½	1½	1½	1½
Robert, Earl of Leicester	2	2	1½	1½	1	1	1
William Humfrey,* of the Mint ..	1½	1½	1½	1½	1½	1½	1½
Benedetto Spinola	2	2	2	2	2	2	2
Cornelius de Vos	1	1	1	1	1	1	1
Jeffrey Duckett	1	1	1	1	1	1	1
Richard Springham, alderman	1	1	1	1	1	1	1
Lord James Mountjoy †	1	1	1	1	1	1	1
John Dudley ‡	1	1	1	1	1	1	1
William Winter	1	1	1	1	1	1	1
George Needham	1	1	1	1	1	1	1
William Patten	1	1	1	1	1	1	1
Jeffrey "Welcheton"	1	1	1	1	1	1	1
Lionel Duckett, alderman (later kt.) ..	1	1	1	1	1	1	1
John Tamworth	1	1	1	1	1	1	1
Matthew Field	1	1	1	1	1	1	1
Edmund "Wurschopp"	1	1	1	1	1	1	1
Anthony Duckett (of Grayrigg, West'd.) ..	1	1	1	1	1	1	1
William Burd (treasurer to the Co.) ..	1	1	1	1	1	1	1
Thomas Smyth, customer	1	1	1	1	1	1	1
Earl of Pembroke	1	1	1	1	1	1	1
Richard Barnes, alderman	1	1	1	1	1	1	1

To anticipate a little—by the beginning of 1573 Nicholas Culverwell, Thomas Revet and Anthony Gamage were added to the list which otherwise remained much as it stood in 1569. The figures for Christmas, 1576, just before the end of Haug & Co.'s connection with the business, are: Haug & Co. 9½; Lord Burghley 2; T. Thurland 1; E. Thurland ½; R. Wetheral ¾; Leicester 1; Spinola 2; Jeffrey Duckett ½; R. Springham ¼; Mountjoy ¼; John Dudley ¼; Winter ¼;

* Assay master of the Mint, who received a grant in 1564, together with Christopher "Shutes" (Schütz) of St. Annenberg in Saxony, an expert in "calamine stone" (zinc ores), to mine and work in all places except those granted to the other company.

† Received a patent in 1565 for 21 years, giving him exclusive right of working mines of copperas and alum.

‡ Of Stoke Newington, d. 1580, brother of Richard Dudley, of Yanwath; their grandfather was the brother of the Earl of Leicester's great-grandfather (C. & W. *Transactions*. o.s. ix., p. 318). By his will (*ibid.*) he seems to have been a friend of Customer Smyth.

George Needham $\frac{1}{4}$; Patten $\frac{1}{2}$; Sir L. Duckett 1; Tamworth $\frac{1}{2}$; Field $\frac{1}{8}$; Anthony Duckett $\frac{1}{4}$; William Burd, treasurer to the Company, $\frac{1}{4}$; Customer Smyth, $\frac{1}{4}$; Lord Pembroke, 1; Richard Barnes, $\frac{3}{8}$; Nicholas Culverwell, $\frac{1}{2}$; Thomas Revet, $\frac{1}{2}$; Anthony Gamage, $\frac{1}{4}$. And in 1580, when the company was reconstructed by Customer Smyth, the English shareholders were Lords Burghley, Pembroke, Leicester, and Mountjoy; Spinola and Tamworth; Aldermen Duckett, Gamage, Barnes, and Springham; Customer Smyth, T. Revet, W. Patten, N. Culverwell, W. Winter, J. Dudley, W. Burd, Jeffrey Duckett, Anthony Duckett, M. Field, and G. Needham. That is to say, nearly all the English shareholders kept their places in the Company, while the German shares (10 out of 24) were in the hands of Daniel Hechstetter for "the strangers." Mr. W. R. Scott (see the Bibliography given above) points out that the average price realised was £1200 a share, which meant no more than the right to participate in the monopoly; and that beside this initial outlay, shareholders were liable to calls for prospecting and for development of their properties. From these accounts I gather that most of the English shareholders did not respond to these calls.

The first of the detailed account books begins with 1569, but scattered through the volumes there are some notices which give general returns of expenses for the first four years, as well as a few particulars regarding the journeys of the miners to England and the implements and materials supplied from Germany. For the sake of clearness and brevity I have tabulated the figures representing the initial outlay, giving from 1566 to 1568 the sums in pounds only (most of the accounts being kept in English money), and where the odd shillings and pence of the original reach more than 10s. the amount is represented by the next higher figure in pounds (£19 9s. 6d. is stated as £19, while £19 10s. 6d. is given as £20), though

	1564-5.				1566.								1567.								1568.								1564-8.	
	£	s.	d.		Feb.	Apr.	June.	July.	Sept.	Nov.	Dec.	Feb.	Mar.	May.	July.	Sept.	Nov.	Dec.	Feb.	Apr.	May.	July.	Sept.	Nov.	Dec.	£	s.	d.		
General Expenses ..	938	5	5		9	16	2	99	10	13	54	122	5	5	11	10	117	27	24	24	25	35	93	185	395	2222	0	4½		
Petty Cash ..	109	16	11		7	11	7	7	7	5	11	9	13	11	7	69	66	19	30	..	19	21	17	11	10	476	14	0½		
Drapery ..	129	16	1½		48	††	..	44	††	††	27	††	..	††	53	††	185	††	††	††	††	††	††	††	††	96	15	6½		
Travelling and Board ..	585	16	2		41	52	82	168	52	61	121	51	38	52	37	265	85	98	42	47	99	46	126	82	106	23-8	16	7½		
Wine ..	52	16	9		32	..	††	..	..	9	13	††	††	††	††	107	43	††	††	42	††	35	††	3	3	71	9	8½
House ..	49	12	5		4	..	8	6	7	††	10	..	1	††	3	24	8	9	5	..	..	29	22	6	9	196	18	8
Furnishing ..																														
Smithy and Iron ..	60	3	0		13	54	34	42	3	25	104	8	41	33	36	22	3	4	28	12	††	95	1	††	20	599	11	5½		
Tallow ..	3	9	0½		††	††	12	††	††	††	4	††	..	..	††	..	††	††	††	††	8	2	††	11	††	9	17	3½
Wood and Boards ..	17	3	8		4	††	16	32	..	††	..	..	..	..	27	..	16	75	..	..	33	1	7	3	..	220	11	4½
Borrowdale ..	749	14	6½		164	104	78	58	1	..	49	61	56	37	31	1	..	..	..	36	14	2	26	12	13	1492	17	11½
Stonycroft ..	22	7	10		12	12	..	..	..	6	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	58	8	9
Fornside ..	49	5	0		24	3	..	..	..	..	..	..	..	..	..	..	..	..	..	6	..	..	..	..	..	82	7	7
Grasmere ..	116	8	3½		83	79	104	91	81	80	70	19	35	9	15	34	41	39	22	21	20	..	..	..	..	962	7	11½
Newlands ..	..	..	..		..	10	16	44	100	134	185	197	220	253	326	288	338	312	239	282	307	214	276	330	364	4478	3	6½
Smelthouses ..					..	..	28	176	125	118	124	60	85	71	113	129	137	190	144	164	208	172	375	299	286	3002	15	4
Minersputt ..	..	..	..		..	..	8	5	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	13	13	2½
Caldbeck ..	..	..	..		..	..	..	14	28	18	5	..	..	..	..	..	..	..	..	..	14	19	37	28	41	203	3	6½
Charcoal ..	..	..	..		..	..	..	40	38	..	207	††	††	††	..	††	144	††	..	††	††	††	205	††	279	853	11	8½
Peat ..	..	..	..		..	..	..	..	4	12	55	5	8	..	27	26	..	44	..	16	32	5	1	266	9	504	9	3½
Carriage of Ore ..	..	..	..		..	..	..	..	..	..	..	..	7	8	10	19	..	30	5	9	5	1	1	81	83	265	4	9½
Lead ..	..	..	..		..	..	..	..	..	..	..	..	13	9	64	19	2	33	..	19	62	..	100	27	6	178	14	5
Carriage ..	..	..	..		..	..	..	..	..	..	..	..	..	..	24	6	12	5	3	8	14	31	14	3	11	119	3	1½
Horses ..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	32	10	8	10	6	17	5	34	22	2	145	11	1½
Buttermere ..	..	..	..		..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18	10	238	4	2
Total expenses, 1564-5, £2884 15 2					Total expenses, 1566, £3927 5 3				Total expenses, 1567, £5076 18 1				Total expenses, 1568, £6722 11 9½				£1861 10 3½													

even so the totals do not work out quite accurately in the last column. This, however, is copied from the original returns, as are the total yearly expenses at the foot of the table. As the figures indicate expenses only, this mark (§§) means that a profit was made on that account by sales.

The accounts were made up seven times a year, and it is worth notice that the year began with January 1st, not (as usual in England at the time) on March 25th. The first term was from January 1st to Shrovetide; the second to Easter; the third to Whitsuntide; the fourth to St. James' Day (July 25th); the fifth to Holy Cross Day (September 14th); the sixth to All Saints' Day (November 1st), and the last or Christmas Term ran to the end of December. The terminal accounts, written in Keswick, were sent to London, where, in the earlier years, Hans Loner,* the London agent, worked out the scattered items and brought them together in some added pages of balancing; this, later on, was done at Keswick by Hans Merer or Ulrich Frass; and then the sheets were sent to Augsburg. Most of the terminal parts bear the endorsement "Received at Augsburg on such or such a date," and this date is usually about six weeks later than the end of the term.

The various headings under which items were entered have not been carefully preserved in the extracts here given, but need a word of notice in connection with the table.

Drapery was the original business of Haug & Co., who tried at first to sell silk and satin and other costly stuffs at Keswick. After a while there seems to have been little demand except for linen, woollen and sacking used by the miners and in the mines. But in these first years they disposed of more than £400 worth, partly

* The "Johan Louver" (for Lonner) of the S. P. D.

to their own people and partly to neighbours ; having £96 15s. 6½d. worth in hand on December 31st, 1568.

Travelling and board included expenses of masters and men, coming and going between Germany and England, or on business journeys here, as well as their keep. Nearly everything was done on the truck system ; the Company catered for the men from Germany, supplied them with tools, candles, and materials as well as lodging, clothes, food and drink ; and the value was knocked off their earnings. For a body of men in a strange country, and at a time when coin was very scarce, no better system could have been followed. Some of the men ran into debt and did not get their heads above water for years ; but there is plenty of evidence that the Company was very easy-going, and now and then wrote off the men's debts to general expenses.

Wine, before the days of tea and coffee, was a great item in any housekeeping. The firm bought by the tun, and retailed to the men at a price which, as this table shows, made no profit. Later than 1568 they brewed their own beer on the Island, but in these earlier years beer is included in the wine account and not treated separately. In some few instances they sold wine to outsiders.

House-furnishing represents the contents of the Masters' house, in which Thomas Thurland, Daniel Ulstett, and Daniel Hechstetter successively lived, and of the lodgings of the departmental chiefs. But the outlay under this head seems to be charged eventually to the tenants of the house, and knocked off against the account for their salaries. The higher employés, no less than the lower, received no cash but what they drew out at various times, leaving the balance of their stipends to accumulate or to stand against expenses incurred by or for them. Every few weeks we find sums of one or two hundred pounds in gold and silver coming from London, but the coin in circulation did not nearly represent the value of business

done, and, of course, there were no bank notes or cheques ; so that elaborate book-keeping and long credit were necessary.

Smithy and iron included wages of smiths, German and English, as well as cost of iron, steel, nails, &c. As already remarked, and as will be seen in the course of the accounts, certain miners not on daily or weekly wages paid for their tools out of their earnings ; others received smith's work free. The time and materials of the forges at Smelthouses and Borrowdale were charged to various accounts, such as *Building* ; and this complicates the entries, and further explains the apparent profit on *Smithy and iron*. The Company's men did no work for outsiders except in two or three instances as a special favour.

Tallow means candles for the mines, workshops, and lodgings ; also small quantities to grease carts, &c. Later on, the train oil burnt in the miners' lamps comes under this heading ; and as these items are sometimes charged to the men and sometimes to various accounts, a profit is often shown.

Wood and boards. Many of the buildings, even for furnace-houses, were timbered, and if stone-walling was used it was of less importance in the construction than carpenters' work. Several specifications will be found throwing much light on the building of the time. There was also a great demand for woodwork in the mines, as props and frames, water-courses, and platforms. Robinson, in 1709, noted the lavish use of the best oak in the German workings of the Newlands mines, and we can see throughout the accounts how men were continually employed in felling timber and sawing or cutting boards. Fynes Morison, who travelled in Germany shortly after this date, speaks of their mechanical saw-mills ("Shakespeare's Europe," ed. Charles Hughes), but there is no definite account of such contrivances

up to 1577, though Camden seems to have seen saw-mills at Keswick. The profit on *wood and boards* again means a charge on other accounts, and not sale to outsiders.

Borrowdale, Stonycroft, Fornside, Grasmere, Newlands, Minersputt, and Buttermere are the mines. The tabulation shows when they were started and with what fortune they met; and this point is not without interest. The first four were worked from the beginning, and seem to represent mines known before the coming of the Germans.

Borrowdale is written at first "Barnthal," from which it is evident that the local pronunciation was "Borrandal," in spite of the mediæval spelling "Borcheredal" (the Norse *Borgar-dal*, dale of the burg, namely Castle Crag); later spelt "Barrathal" or "Barradl," for the German A was nearer our "aw," and often represents an English O. The earliest workings must have been near Grange and Manesty, where many veins crop out, and remains of early operations have been seen. The great Copperplate vein above Ellers does not seem to have been found at first; in August, 1567, the Earl of Northumberland's officers write of it as a new site.

Stonycroft (Stenickrafft), near Stair in Newlands. Mr. Clifton Ward said: "There are a good many old grub-bings on the backs of veins round the flanks of Rowling End, but very little or nothing is known about them." Mr. Postlethwaite found old workings with stope and feather (the style before gunpowder-blasting) on Barrow.

Fornside (Farenseit) is in the Vale of St. John, east side. The geological survey map shows no mineral veins there, but several under Wanthwaite Crag, a mile to the north, and one a mile to the south, near Stanah. Mr. Clifton Ward noted slight workings above Thirlspot.

Grasmere (Gressmor) was thought important enough to have a stamp of its own, though as time went on the veins petered out, and no modern mining has been done

there. The geological survey shows mineral veins crossing Greenhead Gill at two points, and up the Gill remains of buildings and small shafts used to be more visible than they are now. Some of these have been supposed to be the sheepfold of Wordsworth's "Michael"; but Mr. Gordon Wordsworth tells me that the late Edward Wilson, the local authority on old Grasmere, was quite clear about a tradition of ancient mining in Greenhead Gill.

Newlands (Neulandt) is said to have been the site of a mine in the thirteenth century. If it were known before their arrival it is strange that the Germans did not go there at once; we see from the tabulation that they began work there a little before Easter 1566. In August of that year, Thurland wrote to Cecil that a coppermine had been discovered there, "the richest in England." The Germans called this rich new find, "Gottesgab," "Gotzgab"—God's gift. Robinson (1709) said of the veins at Newlands "the richest was that they called Gowd-Scalp . . . now Gold Scalp." And since then it has been known as Gold Scope, and the name derived from the small quantity of gold present in some of the ore. But giving "Gottsgab" the breadth of the German vowels and the indistinctness of the German consonants, we can understand how easily it became "Gowd Scalp" and "Goldscope," and we need not hesitate about the derivation of the name. The lead vein, afterwards so profitable, was not found at first; Mr. Postlethwaite explains, and the geological map shows, that it was low down and not so observable as the copper vein which crosses it and runs up the side of the mountain. This copper vein has been dug away by the Germans to the breadth of nine feet in some places, and must have been very rich; we see from the table how rapidly the figures increased, showing its value by the expenses allotted to it.

At a very early period the *Fürdernus* level* and the *New Level* are mentioned in these accounts; then come workings named the *Franckenstein*, the *Bagpipes* ("Sackpfeiffen," perhaps from a pocket in the "pipe" of ore), and the *Bagpipes Nick* (by which I understand an open cleft above the level); *St. Leonard* (Lienhart), the *Hamblin* or *Hamlin* (meaning the wether lamb?), the *New Cut* or *Nick*, *St. Daniel* and *High St. Daniel*, the "Don't Know" (Waiss nit) vein, at which was the *Windenburg* (windlass-castle or castle of the winds?), and *St. Peter*. Next we have *St. Joseph*, where they got into the lead-ore vein. Then, in the copper, *St. John*, *St. George*, *St. Richard*, the *Bird's Song* ("Vogelsang"), the *Grapevine* ("Weinreben" at Fürdernus), and the working above Littleton, which brings us to northward of Goldscope, at the back of the Brandelhow mines. The Dalehead mines, considerably to southward of Goldscope, were worked by the Germans, and Robinson gives some of the names—*St. Thomas* and the *Long Work*; but these

* The Fürdernus (I cannot suggest the meaning of this name) or the "new level" may be referred to in the following passage, from Mr. Clifton Ward's book already quoted. "The old level was only 1 ft. 8 ins. wide and 6 ft. high, with the incline of the lode itself 60°. On the re-opening of the mine within a recent period many of the old tools were found, such as iron wedges and feathers, the former sometimes having chains attached to them, and being 4 ins. to more than a foot long; also some of the hammers minus their wooden handles. Another method of working seems to have been the following: holes were made about 3 ins. or less in diameter, and filled with lime, water being then poured down a fine perforation made in the centre, the expansion of the lime split the rock all around. The veinstone was worked out in stopes of great regularity and exactness, all 6 ins. long and the same deep, so square that a mortice might be fitted in without further chiseling. These processes broke up the ore-bearing rock into small pieces, about 2 ins. square or less, and in the valley all around the old mine there are numerous heaps of such sized fragments, where they were picked and dressed." Of this lime-process there is no sign in our Accounts.

Robinson, 1709, describes the props and frames of "the best oakwood" and the "water-gin" to which water was brought in "troughs of wood upon the tops and sides of high mountains, near half a mile from the vein."

It may be added that the "feathers" are described by Mr. Postlethwaite as two thin pieces of iron, 6 ins. long, half an inch broad, flat on one side and round on the other. The "stope" or wedge, of the same length and breadth, was hammered in between the feathers until the rock split.

A stope or stob may mean either the wooden or iron wedge, or a piece of hewn stone. The ancient levels or adits were driven with great economy of labour, in section the shape of a pear, stalk downwards, and only large enough for a man to pass.

names do not appear in our period. A stamping mill was soon built at Goldscope, and work went on busily until 1576, when it began to fall off, and the strength of the company was spent upon Caldbeck. But in 1577 a new mine started work at Newlands again.

Caldbeck (Kolbeckh, Kadbeckh, Kattbeckh) is also supposed to have been an old mining site, but the Germans did not attack it until the middle of 1566, and then only tentatively. They took it up again in 1568, found lead as well as copper, built a stamping mill, and spent much money in carriage to and from this comparatively inaccessible place. Ancient workings are found at Roughtengill, Haygill, and Redgill (the Driggeth mine is more modern). The German names for the workings were the *Reiterin* (which might mean "the Lady on Horseback," from some queerly shaped rock; or possibly, as "rider" is a mining term for a certain kind of vein-stuff, it may allude to the class of mineral found there), *The Lower Nick*, *St. Emanuel*, the *New Adit*, *St. David* (Emanuel, Daniel, and David were the names of Hechstetter's sons), the *Luck* (Glückh), *St. Elizabeth*, and *St. Mark* (perhaps in compliment to Mark Steinberger).

Buttermere; found at the end of 1568, but not worked for long or with much profit. The map shows three veins on the hillside north-east of the lake.

Minersputt, perhaps, is written for "Minerspütt," or Miners' Pit, as the German clerks used ü for i indifferently, and often omitted the two dots over modified vowels. But I cannot suggest the site of this mine: there are ancient workings at Ladstock near Thornthwaite, and at Gategill under Saddleback, as well as at Brandelhow, any of which may be meant.

Wythburn (Weinborn) was the site of a mine found in 1573 and worked for a short time; possibly this may be the Helvellyn mine of the nineteenth century.

Smelthouses.—Until some ore had been won and

assayed abroad—samples were sent to Augsburg—the furnaces were not needed. These were begun in the summer of 1566 at Brigham, near Keswick (this Brigham must be distinguished from the Brigham west of Cocker-mouth, whence lime was brought). Lady Radcliffe leased the land at the low rent of 1s. a year for the group of works which rapidly grew into size, importance, and expense. Already, after the first summer's building, Thurland confessed (September 30th, 1566, to Cecil) that they were "more chargeable than he had imagined;" they had cost £300, which was merely the beginning of continual outlay; and money was worth about five times its present value. No wonder that Hans Langnauer, in 1570, wrote the letter which may be read later, full of apprehension; that Loner was blamed, later still, for allowing their building-account to grow so far beyond all estimates; and that he shifted the blame to Hechstetter in vain, but had to accept his dismissal in 1576. Haug & Co. retired from the Company in the year following; while Hechstetter remained, confident of success, to see the fruits of his labours. It was no doubt an expensive business, to create from the bare soil, and in a country so barren of facilities, the famous cluster of workshops and machinery of which Camden, at the end of the century, wrote: "Not without admiration to those that behold it."

"Heer was the bravest water mille of the dutch invented. Daniel and Manuell came from bejond seas in Queen Elizabeths Time for the smelting and fining of Copper Ore, gott in the mountains heer about; but now the woods are gone and the work decayed."—So said Edmund Sandford in 1675 or thereabouts. "The smelting-houses were so many that they looked like a little town," wrote Sir Daniel Fleming in 1670, "yet now there is but one house." A hundred years later Nicolson and Burn rhapsodized over the "sacred woods

and groves," "which had for ages shaded the shores and promontories of that lovely lake—

"Where the rude axe with heaved stroke
Was never heard the nymphs to daunt,
Or fright them from their hallowed haunt."

But the accounts for *Charcoal*, *Peat*, and *Carriage of Ore* show the rise of actual smelting at the new buildings and the complete devastation of the woods, far and wide. This work was done almost entirely by an army of local farmers ("pauern"), though, as we shall see, skilled workmen for charcoal-burning were imported from the Midlands. But the sum of over £1600 distributed in the neighbourhood in two and a half years, in addition to all that found its way by employment, purveying, and indirectly into local pockets, must have assured the Keswick folk that their early hostility to the Germans had been a great mistake.

Carriage usually meant fetching goods from London or Newcastle by the ordinary carriers. In the middle of 1567 the Company began keeping its own carts and horses, for building and for carriage of special articles close to Keswick; but this did not supersede the use of English packhorses for charcoal, peat, ore, and a little later for stone-coal.

As the work developed, other accounts were opened. Most of these will be found represented; though I have omitted all under the heading of *Interest*, because their value for our present purpose is small in comparison with the many which claim a place.

1564.

For 1564 I find only one entry, recording a payment on June 21st to Daniel Hechstetter, Ludwig Haug, and Hans Loner for travelling (from Augsburg to England) and for men hired from "Castein" (Gastein in Tyrol,

the mining centre). This relates to Hechstetter's first journey, when he formed the company as already told. £53 13s. 8d.

1565.

In 1565, September 24th, there is mention of Matheus Sues as travelling to England, and next year, June 30th, additional payment to him at Augsburg on his return from Keswick. On September 30th, 1565, are notes of "two men's travelling; Michel Thurer's journey to England; payment to Martin Berger's wife (Berger was a miner who left his wife at home, though she rejoined him later*); lead from Villach (in Carinthia, where the lead mines of the Bleiberg were famous; the lead was used in smelting copper); Israel Waltz, 'barber' (the surgeon of the Company at Keswick for some years†); four men travelling; Zipprian Schaller (who next year assayed samples from Keswick, and later came in person, only to be buried at Crosthwaite Church); and of Michel Durer's return home. £170 1s. 8d."

These are no doubt expenses already incurred by men who came to England in July. In the Records of the Privy Council there is the following (kindly contributed by Mrs. T. H. Hodgson):—

At Grenewich the viijth of July 1565. A letter to the Mayour and other officers of Newcastle that where there be presently certaine Almaynes, to the number of xl or l, looked for to arryve at that towne within theese x dayes, they are willed to cause the sayd Almaynes to be for theyr monny curtesly receyved and used, and by their good ordre guydyd and conducted from Newcastle to Keswyk in Cumberlande, the place where they ar appointed to rest and woorke.

During 1565, as we learn from the English State Papers, Thurland and Hechstetter were at Keswick; in September

* The Crosthwaite Registers mention sons of Martin and Barbara "Parker" (*i.e.*, Pairker, Berger)—John, baptized 1568, Leonard 1570, and Martin 1572.

† He married Jane Wood at Crosthwaite, 1567, and baptized Mary Magdalayne 1570 (died 1595), Jane 1572, Mariajacobi 1578, Mathewe Israeli 1580. Jane, their mother, of Church Steele, Keswick, was buried 1595-6.

we find Hans Loner and Ludwig Haug associated with Hechstetter. The last, from a notice in these accounts, must have been for a time at Keswick as general manager—"Junker Ludwig Haug," a near relation of the leading men in the Augsburg firm. Loner seems to have been employed by the Haug Company as London agent. From the various letters that passed between these managers of the mines and the English authorities we gather that in April the Queen excused the Company from royalties until the work should be established; in May, silver was found in the copper ore (this, no doubt, was true, as silver is present with copper pyrites in Cumberland, though it was chiefly from lead ore that silver was extracted); in July, the Queen gave leave to fell timber in her woods, and granted Thurland and Hechstetter a commission to apprehend disorderly persons employed by them (the beginning of friction between German and English miners). In that month also Hechstetter had invented a new engine for draining mines, patented in 1568, and he applied for "privilege of waterworks," offering to form a company and allot shares, as already mentioned. Thurland seems to have got into financial embarrassment, and in August announced that he had proposed a composition with his creditors and the executors of one Warde (of Kendal?). In September, the want of wood was felt, and it was proposed that Needham should go to Ireland for it, a suggestion which we shall see was carried out, but with no success.

1566.

In 1566 we find Hechstetter and Loner at Augsburg in April; and in May, Thurland at Keswick, apparently suspicious of the Germans. He thought they were keeping secrets about the gold and silver expected from the mines, and asked Cecil to get an independent expert from Flanders. In June Hechstetter and Loner wrote to Cecil that the samples they had taken to Augsburg

for assay had produced good copper, and they were coming back to England. Then, on August 1st, Thurland announced the find of a rich mine at Newlands. This was on the manor of the Earl of Northumberland, and led to trouble hereafter to be told ; but the mine was Goldscope, and 600,000 lbs. of ore had been raised before the Earl stepped in to stop their working. In September, Sir Thomas Gresham sent a bond in 500 crowns to Johann Fugger, of Augsburg, as security for payment to Johann Steinberger for sending twenty miners to England. By the beginning of October, Hechstetter was back at Keswick, and wrote to Loner (in London) that the Germans had been ill-treated by the English workmen : he said that Leonard Stoultz had been murdered by one Fisher and his accomplices, and that Lady Radcliffe was protecting the murderers. Alderman Duckett wrote at once to Cecil, complaining of the outrage, and on the 16th the Queen wrote to Scrope, the Lord Warden of the Western Marches, and to the Justices of the Peace of Westmorland and Cumberland, bidding them repress the assaults, murders, and outrages on the Almain miners lately come there for the purpose of searching for and working minerals.

From these notices it has been inferred that the Germans were not welcomed at Keswick, but met with " assaults, murders, and outrages." It is an old story that the Northern Englishman heaves half a brick at the head of a stranger ; and these strangers were come, it must have been felt, to take the bread out of the dalesfolks' mouths. That any such prejudice was ludicrously unfounded we shall soon see ; the Germans showered money upon the district, at the expense of the Augsburg firm who sent them. But at first, no doubt, there were some troubles, though these troubles appear to have been greatly exaggerated through Hechstetter's natural anxiety. He speaks of Leonard Stoultz as murdered. If any one of the name was killed at Keswick, he must have been

buried at Crosthwaite and recorded in the Register; and indeed, there is an entry of the burial, in September, 1566, of "Leonard and John Stilte, infants." Now as Jobst Stoltz,* whose name we find soon afterwards in the accounts, was entered in the Crosthwaite Register as "Stilt," and as there is no other Leonard with a foreign name entered at that time, as buried, the murder must have been committed on a baby. This can hardly have been anything but the accidental result of some casual rough behaviour, not an organized attack on the miners. One can imagine a "row" and a chance stone thrown without intention to kill. If there had been any such intention we should hear of it either in the Register or in one of the letters of the time: for nothing would be easier than to do away with an obnoxious "Duchman."

Nor was Lady Catherine Radcliffe unfriendly to the Mining Company, though she must have felt bound to protect her own people. At the moment of this disturbance she had already leased the ground for the new smelthouses at a shilling a year; and very soon afterwards, as the accounts show, she was doing various business with the Company in a perfectly friendly way.

A stronger evidence of welcome is found in the Registers. Already, before the outbreak, two of the German miners, Kalcher and Puchberger,† had married English girls,

* "Jobbe Stilt," buried at Crosthwaite, May, 1568. Eva Stilte married Felix Waldner (Wallner) at Crosthwaite, 1566-7.

† Steffan Kaleher, in the Crosthwaite Registers Calker or Colker, married Margaret Bulfull 1565; she died 1570; in 1570 he mar. Esaybell Atkinson and had children, Janet 1572, Annamaria 1574, Marcus 1576 (d. 1597), Mary 1580 (d. 1597), Elizabeth 1582, Fronick (Veronica) 1586 (m. Rich. Myrehouse of St. Bees parish 1611), Margaret born and died 1589. Stephen C. of Newlands bur. July 17, 1594. Thomas C. of Newlands mar. Janet Dickinson of Newlands 1602, and went to Coniston where he had children, Agnes 1603, Elline 1608, Stephen 1610. Then he went to Seathwaite in Borrowdale, and his son William was bapt. Crosthwaite 1612.

Symon Puchberger or Buchberger—old German P and B are interchangeable (from Puchberg, a mining town in Lower Austria near Ternitz)—founded a family which remained long in the district, known as Putparker or Puthparker. Katherine, bur. Crosthwaite Sept. 18, 1598, may have been the mother or sister of this SYMON (I) who in 1565 mar. Janet Fisher of Grange (in Borrow-

one from Keswick and one from Grange in Borrowdale; and in the following year there were no less than fourteen marriages of "Duchmen" into the dalesfolk's families.

Returning now to the German accounts for this year we find that in 1566 men were hired at Schwatz, and a party headed by Hans Premauer, and including Ulrich Schlegel,* travelled to England. Other names of the party can only be inferred, but one of them, Laux Vischer,

dale) and had sons *John*, bapt. 1566, Leonard 1567 (d. 1571), and George 1570, at whose birth his mother died. SYMON (I) mar. secondly Janet Dodgson, and had children BALTHAZAR (I) bapt. Sept. 9, 1571; Janet, born 1574, mar. Fitzin Colizou (Kolseisen) 1591; SYMON (II) bapt. Sept. 30, 1576; *Maryan* (? Margaret) 1579; Thomas 1582. Symon (I) of Stare was bur. Crosthwaite Oct. 26, 1597, and his widow 1600. Of his children *John* may be the Hans P. of Stonycrofte (near Stair), who by his wife Margaret was father of John 1597; mother and child seem to have died 1599; after which *John* P. mar. Janet Fisher of Newlands, Dec. 16, 1599. The Margaret P. who mar. Thomas Dover, 1606, may be "*Maryan*" above. BALTHAZAR (I) and SYMON (II) went to Coniston.

BALTHAZAR (I) while living at Birkrigg, Sept. 14, 1595, mar. Agnes Birkhead of Borradell, and had children *Katheren* 1597, and John born 1599, died 1600; probably he went elsewhere (to South Wales?) after this, and before coming to Coniston his dau. *Janet* was born; then at Coniston, Agnes 1605, SYMON (III) 1608, Joseph born 1612, died 1617 (the printed register has "baptized," but the original "buried" in 1617), and Daniel born 1614, died 1630. BALTHAZAR (I), known as "Towsie," was bur. Hawkshead, April 20, 1637, and his widow in Hawkshead Church, May 20, 1637. Of their children (1) *Katherine* mar. (Coniston) 1613, Clement Bankes (bapt. Hawkshead, 1590, probably of Bankground) and had Agnes 1615, Margaret 1618 (perhaps the "Margaret Ba—" who mar. Wm. Banke 1636, Hk.), and Thomas 1621-2, whose dau. Katherine was bapt. Hk., 1650. (2) *Janet* had a cousin of the same name, but is likely to be the J. P. who mar. Wm. Taylor 1628 (there were two Wm. Taylors of Satterthwaite with families at this period) and had children Christopher 1630, Jenett 1631-2 (d. 1632), Margaret 1633, Agnes 1634-5; the wife of one W. T. was bur. Hk., 1638, the other 1640; one W. T. was bur. 1639, and the other 1640-1. (3) Agnes mar. 1626, Hk., Christopher Atkinson of Monk Coniston (no doubt of Atkinson Ground) and had children William born 1627 (d. 1654) George 1631, Agnes 1632-3 (mar. Thomas Dodgson 1650); and perhaps Thomas 1635-6 (mar. Jane Atkinson 1661), Elizabeth 1639 (b. 1701), and Isabel 1646 (mar. George Braithwaite 1665) were also children of this couple; Christopher Atkinson died 1669, and his widow Agnes 1671. (4) Symon (III) mar. Alice dau. of Rich. Harrison of Coniston 1633, and had a son Balthazar (I) 1638; Symon (III) died 1640-1, and his widow mar. Arthur Rigge. Balthazar (III) of Monk Coniston mar. Katherine Harrison 1659 and died 1675.

SYMON (II) mar. Agnes Holme 1601 (Hk.) and had children Balthazar (II) bapt. Crosthwaite, Jan. 29, 1602-3 (as son of Symon P. of Newlands and "Anne" his wife), Jenett 1604, Annas 1607, Margaret 1600, Thomas 1612, Edward 1615, Joseph 1617, Symon (IV) 1621. Of these, Balthazar, (II) mar. (Cn.) 1629, Eliz. dau. of David Rooke, and had daus. Jane 1631 (perhaps Jennet Puffparker, singlewoman, who died Cn., 1674), Alice, Margaret (d. infant), Elizabeth, Annas and another dau.; Balthazar (II) was bur. Cn. 1653. Jenett may be the J. P. who mar. Thomas Parke 1632, and had children Elioner 1632-3, Margaret 1634-5, Annas 1647, and died 1654. Annas mar. 1631, Allan Holme (? of Holme Ground, Coniston) whose dau. Jane was bur. 1648-9 (Hk.).

* For his family at Keswick, see note under the year 1575.

met with an accident while riding after the rest to Miltenberg (on the Main, between Augsburg and Frankfurt), and seems to have returned; he was given 13 florins, 4.4, in compensation. Daniel Hechstetter and Hans Loner returned in the spring to Germany, taking samples of Keswick ore to be smelted and assayed. Further parcels of ore were sent over, and to Keswick were forwarded various articles, including books, a writing-table with drawers, two compass-rings, two mining compasses, 13 hides for bellows, crucibles, and fishing-tackle. There is a charge on the Company for two gold compass-rings, ordered at Augsburg by M. Süess for Peter Schenckhel and "Mr. Neudigat," but refused by them, £3 18s. 8d. In October Lucas Reiter, mine manager at Gastein, was paying out money for the men sent to England, I suppose to their families, as was usual. In November Master Michel Krell, carpenter, and Balthasar Auer, his man, received £6 and £3 respectively for their wives, in view of a journey to Keswick. On November 30th Wolff Carius received 34 florins for the wife of Hans Sthielt in Joachimsthal, "Johans dal" in Loner's London duplicate of this entry.

1567.

In 1567, another party leaving Schwatz February 24th went by Cöln to England, consisting of nine men, who are named: Jobst Stoltz, Jörg Deufferer, Thomas Waldner, Peter Holdbeintner, Hans Helensteiner, Jörg Golmanstetter, Thomas Eissel, Caspar Feninger, and Martin Erenwaldner.* Jörg Arstaller, who had been

* Georg Deufferer left wife and children at Schwatz and sent remittances to the wife regularly until in 1569 the money is paid to his children; his wife apparently having died. In the Crosthwaite Register "George Tyfsteere" (the names are very ill written and seem to be copied from misread notes) married Alas Bradley in 1568 (I suppose this to be Deutiferer, who married on hearing of his first wife's death), and the couple baptized Mabel 1569, and Francis 1572.

Thomas Waldner or Wallner left a father at Schwatz, to whom he sent

twice to England, apparently in attendance on the masters, died on his way home, and there are entries of gifts and payments to his widow—a piece of fustian, arrears of wages, and cost of a horse he had bought at Augsburg to replace a bad one he got at Frankfort. The carpenters, Krell and Auer, came home to Schwatz and were paid off—£17 9s. 4d. There is also a payment for luggage sent to England for Rochius Franck, who, about this time, was in charge at Keswick. On September 1st more men started from Schwatz—Wolff Pruckher, Andre Reindel, Jörg Reichel, and Michel Gremboher,† whose names we shall meet again. Crucibles bought from Arnold Pastor, 4000 assay cupels, weights for assaying, lead from Villach, 16 specially-prepared oxhides from Schwatz, and three valves (*ventill*) were sent to Keswick at an initial cost of £32 12s. 10d.; we can trace

remittances. He married at Crosthwaite Janet Reede 1567-8, and baptized Agnes 1574, Elizabeth 1576 (died infant), Janet 1577-8, Esabell 1579, Alas 1581. Janet Wallner, widow, died 1597.

Peter Holdbeintner sent remittances to his wife in Schwatz as long as he stayed at Keswick.

Hans Hellensteiner or Höllensteiner (Höllenstein is in the Ybbsthal, S.W. of Vienna) continued to send money to his father at home while he remained here.

Georg Colmanstetter (or Kalmanstätter) sent remittances to his wife in Tyrol.

Thomas Eisel is no doubt the T. "Isyn" who married Elioner Yowdall of Manistie in 1567-8.

Caspar Feninger (or Fanginger) and Agnes his wife baptized Anne 1568, Barbara 1569, Elizabeth 1571, John 1572, Balthazar 1574. John "Phenicke's" daughter Isabel was baptized at Hawkshead 1613.

Martin Ernwallner (or Ehrenwaldner: Ehrenwald is N.W. of Innsbruck, on the borders of Tyrol and Bavaria) used to send remittances to his mother at home. He must be the "Hearnwalner" or "Jerne Walner" of the Crosthwaite Register, whose children, by his wife Janet, were Richard 1569, Leonard 1573, Agnes 1575, and Balthazar 1576.

† Wolfgang Prugger sent remittances to his wife in Germany, but had a son Martin at Keswick by Elizabeth Toulson, 1570.

Andreas Reindel also sent money to his wife at home, but as "Andrew Ryndle, Rydyll, Kynder," &c., had children Agnes 1569, and Janet 1570, by Janet Briggs, whom he married in 1572; and they had a son John 1573.

Georg Reichel or Reihel sent money for some time to a wife at home. Janet daughter of George Ryall and Janet Browne was baptized at Crosthwaite 1571; but by 1573 his wife is mentioned in the accounts as employed by the Newlands Stamp.

Michel Gremboher (Krempacher, Krümbacher: of Rattenberg, near Innsbruck) left a wife at home to whom he sent money; and he does not come on the Parish Register.

their route by further payments for freight and customs, but this sketches the general activities of the year, so far as can be gathered from the Augsburg and Antwerp accounts.

Turning to the calendar of English State Papers, we find in 1567 :—

Feb. 13. Hechstetter, writing from Keswick, tells Cecil that Thurland is going to London and will bring information of the requirements of the mines.

Feb. 19. Cecil and the Earls of Pembroke and Leicester write to the Earl of Northumberland requiring him to allow Thurland and Hechstetter, or their assigns, to carry away ore dug at Newlands.

March 7. The Queen to the Earl of Northumberland : she commands him to offer no further obstruction to the miners at Newlands. Any lawful claim he may have in the minerals shall be reserved to him. Cecil and the two Earls also write to Northumberland, referring to the Queen's letter, and saying that they have given instructions thercon to George Needham.

Thurland to Cecil sends plans of Keswick, the smelting house, Newlands, and other mines. Denton, sent last year to Ireland for wood, has returned.

March 14. The Earl of Northumberland replies that he has ascertained beyond doubt that the minerals dug at Newlands belong to him only, and that the workers are trespassing on his land. He writes also to the Queen, the Lord Treasurer, Sir Walter Mildmay, Lord Chief Baron, and other Barons of the Exchequer, praying that the injunction respecting the ore dug on his land at Newlands may be dissolved.

March 16. Thurland to Leicester and Cecil mentions the obstacles he has met on the part of Northumberland.

March 20. Keswick. Hechstetter complains to the Queen of these obstructions.

March 24. Needham reports to Cecil of his proceedings with Northumberland, who claims full rights in the ore from Newlands.

March 25. Northumberland reports to Cecil, Pembroke, and Leicester of his proceedings with Needham, but has consented that 200 buckets of the ore be taken away.

May 10. Needham, from Keswick to the Queen, reports proceedings on conveying her letters to Northumberland.

May 25. Needham, from Keswick to Cecil, describes the

haven and castle of "Pillaflowde" in Lancashire (Piel of Fouldrey, Peel Castle, near Barrow-in-Furness) and an extraordinary fish lately taken there, and mining in Cumberland. He recommends an exchange of certain lands between the Queen and the Earl of Northumberland.

Aug. 29. Needham, from Keswick to Cecil. The officers of the Earl of Northumberland have objected to their working a mine called the "Copper Plate"* as not within the compass of Newlands. He adds the quantity of copper which the six furnaces will smelt daily.

Sept. 29. Thurland writes to the Queen that they have at length attained to the making of fine and perfect copper, and sends a specimen. They only want workmen.

Same date. Hechstetter and Loner, at Keswick, tell the Queen they can now make copper, and they send some to London. They will try whether the copper ore contains silver and gold. They desire a conclusion between the Queen and Northumberland. At the same time they write to Pembroke, Leicester, and Cecil about their success in making copper; Alderman Duckett was present. They recommend George Needham, who has laboured diligently.

Oct. 5. Alderman Duckett to Cecil: the mines will be profitable to the realm; wood and (char)coal necessary. Requests he will cause some persons to be set at liberty, imprisoned for making certain cloth. (? Connected with Haug & Co.'s drapery business.)

Nov. 21. Thurland, Hechstetter, and Loner to Pembroke, Leicester, and Cecil, in favour of the bearer, George Lamplugh. The flood has damaged the work: ore plentiful.

Dec. Petition of George Lamplugh to the Council to be authorized to superintend the mineral works in place of Thurland, and to have a grant of certain tithes, etc., in Great and Little Broughton, Cumberland.

1568.

On May 28th, 1568, the Charter for the Governors, Assistants, and Commonalty of the Mines Royal was signed; authorizing the election of two governors, four deputy-governors, and six assistants from the number

* The Borrowdale Copperplate vein is above Ellers, near Grange, and shows ancient workings.

of English shareholders, who were never to be less than sixteen.

The first letter calendared among the English State Papers for 1568 is from Daniel Ulstätt or Ulstet, who had come to reside in Keswick as representative of the German firm, in the place of "Junker Ludwig Haug," as he is called in the accounts. Daniel Hechstetter was still travelling frequently between Germany and England, and did not come into permanent residence until 1572. This letter reads rather curiously when we remember that Mr. Ulstet was the father of an illegitimate child at Keswick; and if the special provision of fish on Fridays for him be taken as an indication of his religion, it is odd that he should have applied to Queen Elizabeth's minister for a German preacher. The miners from Tyrol, and especially from Styria (whence some by their names must have come), were probably Lutherans, though most Bavarians were Roman Catholics; at least, this was the case shortly afterwards, and all the colony seem to have gone without protest to the English church.* There is no trace in the accounts of the appointment of a German clergyman, though a chapel is mentioned (p. 32); the two Becks, clergy of that period, were pretty certainly English. And Ulstätt was soon on good terms with Lady Radcliffe.

1568, June 25. Daniel Ulstätt from Keswick to Cecil. Is surprised at the mineral richness of the kingdom. Progress of their works, which are opposed by Lady Radcliffe. A preacher in their own language is much wanted among the workmen.

June 30. George Lamplugh sends specimens to Cecil.

Sept. 2. Notes on Needham's letter touching his negotiation with Mr. Curwen for ground at Workington to build a wharf.

Oct. 12. More about the wharf. Difficulty of procuring

* In the Privy Council Acts, June and November, 1574, there is mention of one Martin Moisor or Moiser as apprehended with James Dugdale, a priest, on matters of religion. This looks like the name Moser or Moiser of our colony, but our Martin M. was then only seven or eight years old. Moser, from Mosser in Cumberland or Mozergh in Westmorland, was also a local English surname.

(char)coal. Lease of land at Keswick required. Mr. Lamplugh should be continued in his office.

Oct. 17. Bargain with Mr. Curwen for the ground at Workington.

Oct. 19. The Earl of Northumberland requests from Cecil a final answer whether he is to have a reasonable composition for the mines or not; otherwise he must assert his right and title to them.

The matter went before all the judges and the barons of the Exchequer. It was decided by a majority that as there was more gold and silver in these mines than copper and lead (!) the Queen was within her rights in claiming them; and this remained the leading case regarding Royal rights in mines until the time of William III.

Meanwhile (May 16th, 1568) Mary Queen of Scots had landed at Workington. Sir Richard Lowther, Sheriff of Cumberland, whom we often meet in these accounts, hastened to receive her, and found her at Cockermouth Hall, the house of Henry Fletcher, who did so much business with our Company. Lowther took the Queen to Carlisle, where he was met by the Earl of Northumberland, who demanded the custody of her person on the ground that she had landed within his liberty of Cockermouth. One cannot help sympathising with his bitterness when Sir Richard withstood him at Carlisle, and the Earl flew into a passion, called Sir Richard "a varlet," and used many evil words and great threatenings.

Next year Northumberland led the hasty and fatal Rising of the North, and escaped only into prison in Scotland. But it is interesting to observe that while he was plotting against Queen Elizabeth, and planning to put Queen Mary on the throne, he was letting his woods on Derwentwater to the Royal Company for their building purposes and selling them charcoal, in spite of the very serious injustice that had been done to him.

In 1568 there are the following entries at Antwerp, all under the date of September 30th :—

TRAVELLING :—Carrier bringing Hechstetter, Loner and party from Cöln to Antwerp, £2 5 0. Wolff Carius, his son,* Bernhart Fechtenbach, Martin Berger and Symon Buchberger, while wind-bound at Antwerp, £10. Martin Berger and wife, Wolff Pinder and wife, an old smelter's widow, Master Michel Krell and Balthazar Awer, London to Antwerp, £5 12 2. The late J. Arstaller, who went to England with Hechstetter and Loner in August [1566] and returned with Ludwig Haug in April [1567] to Augsburg, wages at 90 kr. a week, fl. 52 30. Haug and Arstaller with 3 horses spent fl. 80.5. Hans Premauer on the way to Germany received at Antwerp £2 4 4. Christoffer Gauffner, smith, travelling, £1 6 0. Two horses at the inn, 11s. 2d. = £43 18 9.

GENERAL EXPENSES :—Made good to the landlord who put up the last party, and they gave him 2 Reichsguldener (florins = 3s. 9d.) worth only 26 stüber (silver pennies) for dollars at 32 stüber, 2s. Two portfolios for Keswick, 18s. 4d. Account-book bought in Antwerp for Keswick, £1 6 0. Vellum for binding, 1s. 4d. 8 calendars, 2s. 4d. Account-book and Journal for Keswick, £2 5 0. Four pumps, etc., taken to the house, 6d. Six cross-pipes (zwerch pfeiffen) and packing case, 18s. 10d. 3 great scales for weighing ore, 12s. 2d. Wolff Carius on his way home from Keswick, fl. 99. When Mr. Daniel Ulstet inspected the floor (of a smelting furnace?), 7d. Also when he was in Flanders and returned, 6s. 9d. = £24 7 7.

CARRIAGE :—Crucibles, cupels, ore, lead, valise, boxes, £6 15 0.

SMEETING :—Assay outfit and cupels sent to Keswick, £2 12 9.

SMITHY :—7000 lbs. iron from Zeeland, bought in Antwerp, £31 0 5.

* The son of Wolff Carius was no doubt Michel, who appears in the Accounts as a miner for some years, and in Crosthwaite Register as "Michael Carus, duchman," who married Agnes Blacklocke 1567, and had sons John 1570 (died infant) and Gosper 1572. Agnes Carus, widow, married Fabian Erhart, February 23rd, 1573-4. There was also at Caldbeck mine an English workman, William Carus or Cariss, sometimes spelt by the German clerk "Carius." The name Carehouse or Carus is that of an old Westmorland family; Cayrus House in Kendal was in 1363 the residence of Richard Carus (J. F. Curwen, F.S.A., "Kirkbie Kendall").

Bernhart Fechtenbach, grotesquely rendered in the Crosthwaite Register as "Barnard Pheystopoth," married Agnes Warryner of Portinscale 1567, and baptized Dorothy 1567 and Annamaria 1572.

Wolff Pinder and wife, going back to Germany 1568, were perhaps the parents of "Janeta Pindryth, theutonica," baptized 1565 at Crosthwaite.

Other items are :—H. Loner for 2 Reichsguldiner sent from Augsburg to London, 7s. 6d. Ludwig Haug, expenses, £2 16 3. Rochius Franck, a hood, 2s. 2d, leather cape, 20s., and 2 packing cases, 1s. 4d. (Flemish) £1 0 5. Men brought over by Berger, £16 4 0½. Arstaller's last journey to England with Daniel Ulstet, and return with Loner and Hechstetter, paid to his widow in Augsburg, £6 3 9. Mending H. Loner's great clock, £2 9 4. Six Dutch chairs sent from Antwerp to Keswick, £3 13 0. The English ambling horse which Loner damaged and left at Antwerp sold for £15 13 0. Carriage of a basket of various things (Plunder) belonging to Steinberger, 5s. 4d.

The Augsburg account for 1568 includes April 23, payments to H. Roebel at Schwatz fl. 200 (for men hired thence). June 15, two messengers to Schwatz on behalf of the smelters brought over by Berger £1 3 3: and payments to or on behalf of T. Waldner, J. Colmanstetter, H. Setzenstollen,* Hans Thunbelieren, Jörg Gugkhenberg, Jörg Regauer, Hans Mair from Lentz, M. Grembacher (to his wife at Rotenburg, *i.e.*, Rattenberg near Innsbruck), J. Stoltz's widow at Schwatz, Mattheus Scheucher, and J. Arstaller's widow.

These scattered accounts of the earliest years give us, at any rate, some information about the homes of the men who came to Keswick, and suggest facilities of travel and transport beyond any we might have expected at this period.

We now come to more familiar ground, and to greater detail, in George Needham's second journey to Keswick, 1568-1569 :—

Joris Nidham spent in London, on the road to Keswick, and during his stay there, £20 9 7, as following :—

In London ; for a field in which his two horses grazed, Nov. 31, 1567, to July 24, 1568, £2 13 9. Shoeing, 2s. Fetching horses home, 1s. 4d. Mending saddle and girths, 3s. 4d. Hay

* Hans Setzenstollen, smith, is no doubt the "Hance Sitsistalt" of Crosthwaite Register, who, with Christina his wife, baptized Barbara 1567, Jane 1569.

Hans Mair, of Lenz (? Lienz in Eastern Tyrol), to distinguish him from H. M. of Radstatt. He must also be distinguished from a namesake Hance Myre "duchman," who was father of Anne 1601 by "one Avice of Keswick."

Matheus Scheüher or Scheucher was the "Mathewe Shyer" who married Janet Yowdall of Manistie, 1567, at Crosthwaite.

and oats, 10 days at the Mynklin (? Minories), 14s. 6d. Doctoring for his white horse, 1s. 4d. Horse bought from his brother, £3 6 8, = £7 2 11.

TRAVELLING ; (St.) Albans the night, 4s. 4d. Steinstratfordt (Stony Stratford) dinner, 2s. 8d. Northampton the night, 4s. Leicester, dinner, 2s. 9d. Darbey, bed and breakfast, 5s. 8d. Carrier there to take a valise to his brother Richard, 5s. Ten days at Bagston (Buxton*), £1 13 4. Mankaster (Manchester), dinner, 3s. 4d. Hasslenthun (Haslingden) the night, 3s. 6d. Guide from Buxton to Wahlen (Whalley) to Mr. Bradel's† house, 8s. 8d. Sending letter 40 miles to ask Mr. B. to meet him, 6s. 8d. At Whalley, waiting on Mr. B. 2 days and 3 nights, 5s. 10d. Lancaster with Mr. B. the night, 6s. Guide over Sands to Mr. Christopher Preston [Holker], 2s., to Mr. P.'s man, 6d. Guide over [Leven] Sands to Mr. John Preston [Furness Abbey], 1s. 4d. To Mr. J. P.'s man after staying 2 days and 2 nights, 2s. Sending letter to the Queen's Bel (bailiff ‡) in Fornesfels, 1s. 4d. At Colton Chapel, dinner with C. Preston, Mr. Braddyll and 13 men, to swear they would act according to the Commission in regard to the Queen's woods, 13s. 4d. To Gresmor (Grasmere) with Mr. B. the night, 4s. Letter to the Queen's bailiff in Barnthal (Borrowdale), 1s. Borrowdale, food and drink, 2s. 4d. Another dinner there with Mr. B. and the sworn men, 12s.

Aug. 27 (1568), at Grasmere with Mr. B. and 16 sworn men from Furness Fells, to send us an account of the wood there, 13s. 7d. With Hans Reinbrun and 2 men, to give witness what wood in Furness Fells will be useless for our purpose, 8s. 9d. Guide to the Queen's woods, 2s.

Keswick to Rebenglas (Ravenglass) and by the seashore to inspect the harbour and Mr. Corbins (Curwen's) ground, 10s. 7d. Guide, 3s. 4d. To Carlin (Carlisle) to Milordt Bischoff (the Bishop) on business about the woods, 5s. 8d. With H. Reinbrun

* No doubt to visit the Derbyshire mines.

† Edward Braddyll, of Whalley, was Receiver-General and Commissioner for surveying the Queen's woods in Furness, son of John Braddyll, of Whalley, who became rich, temp. Henry VIII. through dealing in land, especially estates of sequestrated monasteries: ancestor of the Braddylls of Furness. Mr. John Brownbill kindly gives me the pedigree:—Edward Bradhull was father of John Braddyll, who acquired a moiety of Whalley in 1553 and died 1578, leaving by his wife Janet (Forster) a son and heir, Edward, aged 44. Edward married Anne Asheton, of Great Lever, and died 1607, leaving a son John and other children.

‡ William Sandys, of Colton Hall, son of William Sandys, of Graythwaite, Receiver-General of the Liberty of Furness, whose effigy is in Hawkshead church, and brother of the Archbishop.

three times to Kaugart (Calgarth, Mr. Philipson's) to buy wood, 8s. 4d. With H. Reinbrun to Kirkuswald to see the Duke of Norfolk,* 2 days and nights, 12s. 8d. Twice to Workington, 4s. 9d. With H. Reinbrun to Borrowdale, to see about charcoal, 2s., and to Mr. Porter's,† 1s. In all, £10 4 3.

PETTY CASH:—Mr. Needham to men bringing game, etc., from the nobility, 6s. 8d. Postage, 9s. 4d. To a glazier sent here by Mr. Philipson, 2s. 6d. To one who brought a specimen from Lanckheshier, 2s. Two colliers sent to Furness Fells, 3s. One ell linen for a window, 8d. Three skins parchment, 2s. String, 1d. To one bringing game from Mr. Anthony Duckhet,‡ 5s. The mummers at Christmas, 1s. To one who informed against illegal wood-cutting in the Christmas holidays, 4s. 6d. To another who laid the same information, 1s. 6d. £1 18 3.

GENERAL EXPENSES:—Gawen Radcliff for a chamber and bed for his (Needham's) servant Anthony, Sept. 24, 1568, to Jan. 19, 1569, 8s. Israel Waltz, barber (surgeon), for making him a gargle when he was ill, 3s. 4d. A great watchdog, with collar and chain, bought by Mr. Needham at Buxton, 11s. 4d. Joris Needham through Ulrich Frass§ in several payments, including £5 expenses to London, £20 1 2½.

The only entry in the English Calendar relating to 1569 is that of a letter from Simon Musgrave, of Edenhall, sheriff 11 Elizabeth, whom also we shall meet again in the Accounts, about the ground bought from Mr. Curwen at Workington, and sending a plan of it with the river and town adjacent.

For subsequent years the English records are scanty, and we can leave the Germans to tell their own tale.

* Thomas Lord Dacre died at Kirkoswald, 1566; Thomas, Duke of Norfolk, married his widow and became guardian of the young Dacres; he obtained the wardship of George, Lord Dacre, by grant from the Crown, and must have been staying at Kirkoswald Castle on family business. I owe this explanation to the kindness of Mr. T. H. B. Graham. The Duke was beheaded in 1572.

† Weary Hall, Bolton, no doubt to make arrangements for coal-mining.

‡ Duckett, of Grayrigg.

§ Written in the Crosthwaite Register "Ulrigg Frosse, Frawce," and "Franse" or perhaps "Frause." He married Mabel Radclyffe 1567, and had Daniel 1568, Mareus 1570, Maria Magdalena "Frawce" 1575, Francis 1580, Alice 1581 (d. infant), John 1582 (d. infant), Ulrigg (Ulrica? a daughter) 1583, Esabell 1584 (d. infant). His later career is noticed under the year 1577.

THE KESWICK "JOURNAL" OF 1569.

Laus Deo 1569, on the first of January in Keswick.

SHROVETIDE RECKONING (RECHNUNNG FASNACHT).

Building expenses to Jan. 3 from 27th ult. in connection with the Smelthouses, disbursed farther as follows:—Jhon Skot, carpenter, paid this week for 10 days' work at 8d., 6/8. Jhon Buckhel, carriage of 10 fother stone to the Smelthouses at 10d., 8/4. Carriage of 22 fother stone from the quarry near the Smelthouses to the smelters' lodging to build a chamber, 5/6. Other workmen this week together with wallers, 17/5.—
£1 17 11.

Smelting expenses this week, as follows:—25 workmen, in all, have done 95 days' work, 53 at 6d. and 42 at 5d., makes £2 4 0. To the crusher or pulverizer (Gestübmacher) his wages 5/4. To the watchman, his wages, 3/6.—£2 12 10.

[This first page is translated in full as a sample of the style. For the rest, it is necessary to condense as much as possible, and to omit weekly repetitions of wages and names.]

Jan. 3. *Wood and boards* from Jaems Radclieff, 13 young oaks or "siplings" at 2/-. Jhon Scot himself 2 days at 10d., also 13 of his men 52½ days at 8d. William Stup, 8 boat-loads stone from Barnthal (Borrowdale) brought over the water at 8d., also 5 boatloads timber from the "Vorwald"* by water at 4d. Jhon Buckhel, carriage of 10 fother stone from the Wood to Smelthouses at 10d. Other workmen £2 14 2.—£5 6 2.

Jan. 10. *Smelting*. 28 men, 71 days at 6d., and 92 at 5d. Crusher and watchman. 4½ bushels kelp (Aschen) at 16d. 2 sheepskins for screens, 1/4. Making by Ulr(ich) Fr(ass's) account
£3 13 4.

House-furnishing, Meils Faschet (Fawcett?) carpenter for a kist and chimney-boarding (Gesimbs) and benches for Mr. Ulstet, 12/-.

* As the "Vorbarckh," found often in later accounts, must be Fawepark the Vorwald must be the wood on the flank of Swinside.

Building. J. Skot, self, 6 days, and 9 of his men, 50 days. Robert Girby (Kirkby), slater, roofing the new stamping-works, with a little roof for the lime-shed, 2 rods $5\frac{1}{2}$ yards, 7 yds. to the rod, at 11/- the rod.—£3 9 4.

Jan. 17. Workmen with the wallers, £7 10 4.

Smelting.—13 men, 74 days at 6d. Watchman and crusher. Dog's food for 5 weeks, 4/-. Ore-furnace set up, 5/-. Small tub, 2/8. Kelp-trough, 2/-. Coopering a tub, 4d.—£2 19 10.

Jan. 24. *Sea or stone-coal.* 92 horse loads at $\frac{1}{3}$ d.; carriage of 42 loads Cockhermut to Keswick at 9d., and 50 to Smelt-houses at 10d. 30 horse loads from Worckhingthorpe, given us by Mr. Corbin (Curwen), at 8d. One given away, 6d. Paid Herr Debiti* (Deputy) through Petter Schenckhel for 8 seam [i.e., load of about 1 cwt. to 120 lbs., in the original "sam"] of sea-coal at 16d.—£5 10 1.

Carriage of 14 seam sea-coal Kolbeck (Caldbeck) to Smelt-houses at 6d. Watchman for several nights at the coal, to burn it, $\frac{1}{4}$. Richard Ryg, collier, 5 days' visit to Keswick, 2/6.

Building.—J. Skot and 10 men. R. Girby, $2\frac{1}{2}$ days at 12d. to roof part of the Smelthouses where the furnace is with slate.† Johan Bugbar (Buckbarrow) and Meils Willson for carrying 3000 slates from Abeldort (Applethwaite) to the Smelthouses at 11/- the thousand. Gilbert Gwarthorpe (Wharton) 17 fother lime for a floor (österreich) at the smelter's lodging at 5d. Christopher Maison, bringing two boatloads boards from Borrowdale at 8d. Extra workmen £4 7 8.—£8 3 11.

Jan. 24. *Smelting.* 4 men, watchman, crusher. Thomas Ryd for pulling down a stone oven at the upper furnace shed 2/6. Man 3 days, 1/6. G. Wharton, 9 fother lime, won and delivered, 6/-. To the Smelters to drink when they made copper, 1/-.§—£1 11 10.

Repairing and caulking our great boat:—150 middle-sized nails 3/6, 30 big nails 6d. 6 boat planks 1/8. 4 lb. hemp 2/-. Alexander Rossgall (Roskell?) shipwright, 28 days at 6d. His

* Deputy Sheriff? or Lord Deputy of Ireland, with whom they were doing business?

† Or "for fear of burning." This seems to have been their first introduction to mineral coal.

‡ In the 17th century building excavated at Rakefoot we found roofing slate; also at the Radcliffe's house on Lord's Island; see *Transactions*, C. & W. A. S., n.s. iv., p. 263.

§ At the end of the last of several processes, crushing, roasting, and "coppering."

man 14/- and boy 7/-. John Bulfeld for their board, 15 days at 8d. and 17 at 10d., and 4d. for ale. Their expenses from Workington to Keswick 2/8. 4 gallons tar 8/-. 28 lb. pitch 7/-.—£4 4 10.

Carriage.—London to Keswick, Six Dutch chairs, weighing with the mats in which they were packed 2 cwt., 112 lb. to the 100, at 1d. the pound. One basket of oranges, 4 pumps for Smelthouses, clothes for Robin our messenger, 1 warming pan to warm beds, 1 barrel linseed oil. Also Stable [the carrier] taking 4 old pumps to London 2/6.—£1 11 6.

Tallow.—P. Schenckhel bought at Newcastle 16 cwt. at 26/8, 4 casks candles weighing 18 stone, 12 lb. to the stone, at 3/6. 6 stone tallow at 3/4; 4 casks for the above 3/- carriage, 9½ horse-loads at 4/-. Also 9 cwt. 9 lb. tallow £12 2 3; carriage, 4½ horse-loads 18/-. Hainry Andrison [of Newcastle] price of a great barrel in which some time ago we received candles 1/6.—£40 12 5.

Wine.—Mr. Peter (Schenckhel) bought at Newcastle 2 casks Rhenish, 94 quart at 6d.; 1 cask Malvoisie, 48 quart at 6d.; 1 cask Muscatel, 48 quart at 7d. Casks 4/8, carriage 6/-. At Kiendal (Kendal) 24½ gallon Claret at 1/-, 4 quarts to the gallon; 11¼ gallon Spanish wine 19/3. He spent 2/-, carriage 2/-. Heinrich Fletscher* [of Cockermouth] for wine in the chapel 18/-.—£9 18 1.

Smithy.—2 barrels steel from London by Newcastle 3/10.

Smelting.—Empty hogshead to hold kelp, 1/4. 4 yds. canvas in which kelp was, 2/-. Mending sacks, 8d.—7/10.

Jan. 31. *Building*.—Jhon Scot and 10 men. Jhon Buckhel, carriage of 24 fother stone. Big stones from Borrowdale for the refining oven at 3½d. the seam. Jhon Hurdt, glazier, for glazing window in smelters' lodging, 14/2½. J. Stup, 3 boatloads timber from the Vorwald 1/-, and 1 boat with stone 8d. Workmen.—£9 9 3.

Smelting.—3 men 18 shifts (Schicht) at 6d. Crusher and watchman. 9½ bushels kelp at 16d. Smelters on making copper 1/- 2 sieves 6d.—£1 11 8.

House-furniture.—Ulrich bought 5½ stone of feathers at 2/8. Cord for bedsteads 3/5. A little mortar for Mr. Ulstet 2/6.—£1 0 7.

* Henry Fletcher, of Cockermouth, was the well-known merchant who, a few months earlier, had entertained Mary Queen of Scots at Cockermouth Hall.

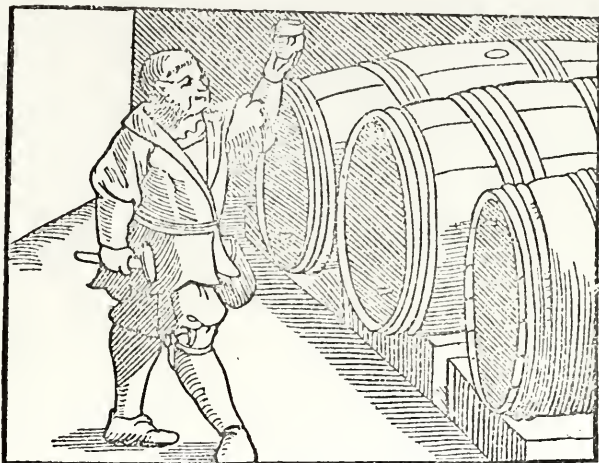
Seacoal.—Anthony Dediman, if he finds coalmines near Keswick, $1\frac{1}{2}$ English miles from Smelthouses, to have £20,* of which now £4 in hand and $\frac{3}{4}$ earnest money.—£4 3 4.

Travelling.—Hans Wautter, our butler, and his wife,† Oct. 4 1567 to Feb. 7 1569 at £9 the year, and 10/- to the maid.—£14.

Feb. 7. H. Wautter repays a loan made in London, £1.

Building.—J. Scot, etc., £7 7 6½.

Smelting.—4 English men at 6d. Watchman, crusher, dog. 18 mine-troughs at 3d. 6 troughs at 1d. Kelp.—£1 18 5.



THE BUTLER: from Munster's *Cosmographia*, 1552.

Rent.—Christel Larickh's widow (Mrs. Christopher Clark) at Newlands, for a store-room 1 year 10/-. Nicholas Fischer, Borrowdale, for a room for Wolff Hund, smith, half a year 3/6.—13/6.

Rochius Franckh, owing to Hans Radermacher for money laid out by Caspar Loner in London on drugs, boots, shoes, clothes, etc., £6 16 4.

Smithy.—Caspar Loner bought in London and sent by Stable [the carrier] 4 joiners' saws $\frac{4}{8}$, 4 wood files $\frac{3}{4}$, 4 iron files $\frac{2}{3}$, 1 tinder-box $\frac{2}{6}$, 3 pincers $\frac{1}{2}$, 3 yards brass wire 10d.—14/9.

* Needless to say he never got it (fortunately), but he spent a good deal in this fruitless search.

† "Ales Waltrs, of Keswick, duchwoman," buried at Crosthwaite, October 3rd, 1571.

Feb. 9. *House*.—100 oranges 2/-, 6 artichokes 2/-, 6 lemons 1/-, 3 sponges 2/-, 2 lb. red cinnabar* 1/5, 2 pepper-casters 2/6, 4 quarts linseed oil and cask 5/10, etc.—£1 2 3.

Mr. Daniel Ulstet bought in London 2 pair boots, triple soles, at 20d., and 4 pair, single soles, at 16d.—8/8.

John Chürckh (Church) of Wecester (Worcester) owes salt sold to Mr. Joris (George) Needham Oct. 10 at Workington £11 9 8. Delivery was expected at Christmas, and Mr. N. on returning to London wrote to him again, and still has to inform us of the result.

Feb. 12. *Building*.—John Scot, etc. 14½ "skep" of lime at 18d., carriage at 32d.—£5 4 3. 10 boatloads timber, carriage, at 6d. 1 at 4d. R. Kirby, 1 rod 2½ yards long and broad, to roof the smelters' lodging at 11/- the rod. Mending smithy roof 2/8. Bringing 7 trees from the Vorwald to water at 4d. Labour, £3 15 8½.—£10 14 9½.

Smelting [as before] £1 6 8.

Joris Lample (George Lamplugh) lends us £20.

End of the first part of Shrovetide Reckoning.

(Endorsed) *Received in Augsburg, March 26, 1569.*

Feb. 16. Lent us by Hainry Fletscher £20. Lent to Miladi Catharina Radclieff at her request, £2. Randal Whart† of Kiental received from Mr. Wm. Pürdt (Burd, treasurer to the Company) on a bill of exchange at 8 days, to be paid us at Easter £30.

Men's families in Germany, eight weeks' payment [to be deducted from their pay]. Georg Deufferer's children, £1 10 0; Petter Holdbeintner's wife, £1 10 0; Jörg Colmanstetter's wife, 18/-; Martin Ernwaller's mother, 7/6; Wolfgang Prugger's wife, £1 10 0; Andreas Reindel's wife, 12/-; Jörg Reichel's wife, 12/-; Michel Krempacher's wife, £1 4 0.

Drapery.—Ulrich Frass has sold to the men Cloth, ½ ell at 9/-; Crash? (Carisea) 2¾ ells at 4/4 and 1½ ell at 4/-; Fustian (Barchat) 19 ells at 10d., and 1 at 12d. "Macheyar" 1 ell at 6d. Cloth of Arras, 7 ells at 16d.; Satin (Atlas) 2 ells at 10/- and ¾ ell at 7/-; Taffeta (Daffat) 1½ ell at 3s. 4d. and 1 at 4/-; Frieze (Friseti) 5¼ ells at 10d.; Linen 20½ ells at 8d. and ¾ at 6d.—£5 2 11½.

* This and the linseed oil evidently for paint.

† Relicta Rallandi Warde was an innkeeper of Kendal, 1575 (*Boke of Record*, p. 75). "One Warde" was mentioned by Thomas Thurland in 1565 (Cal. S.P.D., Eliz.) and "Randal Ward" appears here later.

George Lamplugh lends us £10. Robert Bynlas* of Kieldal received from Gillis Hoffman (the Antwerp house corresponding with Haug & Co.) paid him in cash at London by Hans Radermacher on Mr. Daniel Ulstet's note £100. On Oct. 28 last, Alderman Duckett sent us from London groceries of which the carriage was £2 12 4. The salt sent by John Chürckh to Workington was badly packed and spoilt by rain; charge loss to general expenses, £16 13 1. Henry Fletscher lent and sent by Robin, Thurland's servant, on Mr. Ulstet's note £20.

Board and beer by Gregory Weiss' housekeeping book £28 14 5½. T. Thurland, 8 weeks' board at 30/-. Travelling and messenger to London by U. Frass' account, £3 9 6. Various sums paid to U. Frass, Michel Härpfer [D. Ulstet's servant], R. Franckh, Lienhart Stamler, Marx Steinberger, Hans Reinbrun, Hainrich Röbel, Mr. D. Ulstet, and Gregory Weiss, £37 1 9.

Mr. Ulstet paid T. Thurland and George Lamplugh for coal, £10.

Horses.—Shoeing, 8 times at 9d. Oats, etc., for 9 horses, £7 8 10.

Petty cash, by U. Frass' account, £9 7 6.

Carriage of ore; Ulrich paid Gawin Gree (Grave) for 24 kibbles from Colbeckh, 6/.

Vicar's Island.—Three workmen cleaning the island which we have bought from Jhon Willmson, rooting up bushes, hedges and weeds, carrying away stones, and preparing it for our riding horses, £1 1 0. The price of the island to be £60; paid as first instalment £10.†

Rent to Miladi Catharina Radclieff, paid through her Bailey Parsovel Radclieff, for the land on which the Smelthouses stand, due at Michaelmas, 1/- a year, according to agreement made with (Sir) George Radclieff; three years' rent from Michaelmas 1566, 3/.

Sacking bought by Ulrich for coal and ore; 295 yds. at 3½d., 17½ at 3¼d., 36½ at 3¼d., 20 at 3d., 722 at 4d.; expenses 4d.—£17 8 0½.

* Sir Robert Bindloss, of Borwick, brother-in-law of William Fleming, of Rydal and Coniston, and merchant of Kendal.

† A deed, quoted by Dugdale, gave to Fountains Abbey *temp.* Richard I. "Crosthwayt cum ecclesia ejus, cum villa et cum lagiis de Wattendlane, et de Staynethwayt, et cum toto Langestrothe et insula de Hestholm" (i.e., "horse-island"). The island then belonged to the church and became "Vicar's Island." In 1539 Leland names it "Vicar Isle, full of trees, like a wilderness." In 1541 it was granted to John Williamson (*Nicolson & Burn*, ii., p. 86).

RESUME

1. The purpose of this report is to provide a summary of the work done during the past year in the field of the study of the properties of the function $f(z)$ defined by the series

2. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$. (b) The function $f(z)$ is bounded in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$. (c) The function $f(z)$ is unimodular in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

3. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

4. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

5. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

6. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

7. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

8. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

9. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

10. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

11. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

12. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

13. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

14. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

15. The results obtained during the past year are as follows: (a) The function $f(z)$ is analytic in the region $|z| < 1$ and is continuous on the boundary $|z| = 1$ except at the point $z = 1$.

Stonecoal.—Jhon Damson for 10 horseloads at Cockermouth at $\frac{3}{4}$ d. Carriage to Keswick at 10d. Paid a farmer (Bauer) to look for coal mines 4/- . J. Damson, 10 loads at $\frac{3}{4}$ d. and carriage to the Smithy in Borrowdale at 11d.—£1 2 9.

Stamp in Newlands.—299 shifts or day work at 5d. Quarrying and bringing stone, £6 4 7. Wolff Prugger, carpenter, 15 days at 8d., cutting axle for waterwheel, 10/-—£6 14 7.*

Keswick Bridge.—For the benefit of the Mining Co. and the parish of Keswick, and at the desire of Messrs. Ulstet, Thurland and Needham, these payments are made for the building and improvement of the bridge; the Keswick people agreeing to repay through Mr. George Lamplugh:—Jhon Kee, carpenter, to fell and cut wood, and to make the bridge in a substantial manner (gewährlich), all included, £10 2 9. Jhon de Wudt (Wood) and the Bailey here (P. Radcliff, bailiff of Keswick) for workmen and day labourers who have removed sand, carried stone thither, and made the road passable [for carts ?] £2 11 0.—£12 13 9.

Men's bathroom.†—Whereas the Company consents to have such bath built for the men, at their expense, above Smelthouses, the aforesaid Company, with Messrs. Ulstet and Needham, has accepted the proposals made, namely that until the work is finished the Company shall bear the expenses and outlay, which the men shall afterwards repay out of club-money and fines; this expense is now set down to the men as a memorandum only, in due course to be charged to them; and in the first place, Ulrich Frass by his account makes the following payments:—

* This passage and those following are given in full on pages 38 and 39. It appears that a stamping-mill was being built, with water power; and later on, a specification for a stamp at Caldbeck will be found. The stamping of ore was also done by hand. Mr. John Postlethwaite, F.G.S., of Keswick, writes to me:—"The appliances used by the old men for pounding or stamping I have seen in use when I was a boy. They called it *buckering*. The implements consisted of a cast-iron plate about two inches thick, two feet long and 12 or 15 inches wide. This buckler-plate was bedded on the top of a wall a little higher than a man's knees, and the buckler was a piece of malleable iron about 5 or 6 inches long, 3 or 3½ inches wide and 1 inch thick, with a long wooden handle"—affixed to one face, according to Mr. Postlethwaite's sketch, and forming a kind of bat. The old German word for stamp is *Pucher* (modern *Pocher*), whence probably the Cumbrian "*bucker*."

† "The vse of Bathes is frequent in Germany. For most Cittizens of any account have in their owne howses a priuate Stoue for bathing, which they vse to heate on Saterdag for their owne family. . . . They have also publike Stoues or hott houses in each citty, which they who have not private Stoues, commonly vse on Saterdag. And this frequent sweating is used by the men to repayre their health crased by immoderate drincking as the wemen vse it for clenlynes." Fynes Morison, about 1591-92, see *Shakespeare's Europe*, ed. Charles Hughes.

Israel Waltz, by his bill for 2 men digging foundations $5/2\frac{1}{2}$; Jhon Vischer (Fisher), waller, contract for building the bath and paving the floor, £7 1 2; Wolff Prugger, carpenter, timber-work in room and roof, £8 1 9½; carriage of 24 fother stone from the wood, £1 0 0; 6 days quarrying stone there, 4/-; 12 days riddling sand, 5/-; roofing, 2 rods $3\frac{1}{4}$ yards at 11/- the rod, £1 7 1; carriage of 3000 slates from quarry at 6/- the thousand; 3000 slates from Applethwaite at 11/-; glazing the window, 16 feet at 11d.; in all £21 9 0.

John Gree (Grave), messenger, year's wages, £3.

Building.—J. Scot, G. Wharton, etc., £7 6 1½.

Smelting.—3 men, etc., setting up a furnace; 3 ells linen for towels in the assay house; 16 ells canvas for 3 smocks for coppering,* £1 11 8.

Smithy.—Ulrich bought at Piret (Penrith), 1350 big floor-nails at 1/- the hundred; 1500 middle nails at $5/4$ the 100 (*sic*, for 1000), 8/-; 1500 lath-nails at $2/8$; carriage, $2/-$.—£1 7 6.

Robert Bindloss paid instalment of £100 sent by Mr. Thomas Ly (Lee), Mr. Thurland's servant.—£40.

Wine.—Ulrich bought of John Haryson of Kendal $44\frac{1}{2}$ gallons claret at 1/-, carriage 7/-. Carriage of a hogshead of wine from Mr. Tarston of Carlisle, $6/8$.—£2 18 2.

House.—The house where we eat needed 15 ells of coarse canvas over the dining-room to keep bats out; at 4d., 5/-. 4 ells grey fustian for Mr. Ulstet for a curtain in his chamber, $3/4$. String, 4d.—8/8.

Smithy.—Young Stable [carrier] from London for 20 double sheets of iron sent by Mr. Needham, 525 lb., and 200 lb. steel, £3 7 5.

End of the second part of Shrovetide Reckoning.

(Received in Augsburg, April 9, 1569.)

Newlands.—Wages of hewers, sorters and English day-labourers. Hans Häring,† foreman, 8 weeks at 10/-. Martin Berger for clerk-work, 6/-. Lorentz Dierick, 6 weeks at $5/6$. Hans Mair

* The last process, by which the smelted ore was made into pure copper.

† Hans Häring, Hering (Herring in the Registers), had a dau. Janet, born 1565; by a wife Isabel, who died 1574, he had Barbara 1568, Frances 1570, Janet died infant 1571, Annamaria 1574. He mar. Janet Studdert of Rogersyde, May 29, 1575, and had Froniker (Veronica) 1576, Janet 1580, Cristobell 1582, Thomas 1589. Between the births of Cristobel and Thomas he seems to have been in South Wales; in 1584 he had reported on the copper ores of the Neath district, and in 1585 he was still there.

52 *Laus deo 1569. Adj 21. Febrer In Keswickh/.*

*Uncost uber den Pucher Im Neulandt
soll, Adj—, dito £6 14 7. Und Cassa habe',
Ist die v'schinen Rechnung Weyhen-
nächten, und diss Reck'. Fasnacht,
zur notturfft des angestellten Puch-
ers Im Neulandt bezalt w'den, wie*

45 *volgt/: — — — — —*

— *Erstlich zalt 299. Schichten od' Tagew'ckh*

20 *den tag zu .5.d gerait, denen so die
Stein zu dem Pucher gebrochen, und
die stein vom Berg, zum ort gezog'
haben, Laut Ulrich Frassen habender
Zettel thut*

£6 4 7

*Dem Wolff Prugger Zimer-
man zalt .15. schichten adj. 8.
den Welbaum darzu auszu-
hauen, thut*

£- 10 -

£6/14 / 7 £6 14 7

*Uncost uber Keswickher Pruggen soll,
Adj—. dito £12. 13. 9. Und Cassa haben,
Ist umb d. zu des Bergw'ckhs und
gemainen Mans zu Keswickh not-
turfft, und aus beuelch H'n Ulstets,*

46 *Thurlandts, und Mr. Nidhams, umb
— machung und besserung d' selben,*

20 *ausgelegt und bezalt w'den, Welliches
die Keswickher Irem bewilligen nach
bezalen wollen, und durch Mr. Joris
Lample wid' eingebracht w'den soll,
wie volgt/: — — — — —*

*Dem Jhon Kee zimerman zalt, zu
sollicher Pruggen, d. holz zufellen, aus
zuhackhen, und die Prugg gewerlich
zumach', für all sein Arbeit—£10 2 9*

hinumb

Laus deo 1569. Adj 21. Febrer In Keswickh/.

Von dem Uncosten hieh'tragen £10 2 9
 Dem Jhon de Wudt, und dem
 Belj alhie P mehr Arbeit', und
 Tagw'ckher zalt, so den sand
 auszogen, Stein hin zutrag'
 und den weg zum faren ge-
 macht haben £2 11 -

£12/13 / 9 £12 13 9

Uncost uber d' Knappen Badtstuben
 soll, Adj—. dito £21 9 -. Und Cassa
 haben, Ist umb nach dem die gesell-
 schafft d' Knappen, sollich Bad, ober der
 Schmelzhüttin, auf Iren Costen
 46 bawen zulassen bewilligt, hat doch
 — gemelte Gesellschaft, bei dem H'n Ul-
 20 stet und Nidham souil, Und nam-
 lich d. die gemaine Gewerckh', den
 Uncosten und v'lag d' Zeit, bis zur
 verfertigung thun wolten, bit-
 lichen erhalten, Welliches sie nach-
 mals, aus dem Brud' und Straff-
 gelt Irem erfietten [?] nach bezalen
 sollen, So Inen den Knappen hie
 allain P memoria gehalten, unnd
 teglich wid' bei Inen einbracht wirdt,
 Und zalt Erstlichen Ulrich Frass Laut
 seins Mem : ac/a : 83/31/50. Wie volgt/:
 Erstlichen dem Israel Waltz zalt, L :
 seiner Zettel P 2. Arbeiter so die
 grundfest ausgegraben £- 5 2½
 Dem Jhon Vischer Maurer
 zalt für sein Geding, d. Bad
 auf zu mauren, sambt dem
 Esterich darauf zuschlag' £7 1 2

Sa : hinumb £7 6 4½

[THE MEN'S BATH-ROOM : see p. 36.]

of Radstadt, 4/-. Jörl Staudacher, 2 weeks at 5/6. Matheus Oberstander, 2 weeks at 5/6.—£7 5 0.

[The above are under the heading "Herrn Arbaiter," by which I understand day-labour, or men earning wages by time-work. The other miners come under the headings of "Gedinng," bargain or contract work, and "Lehenschafften," which obviously means what the copperminers at Coniston used to call "tributing." By this the miner chose his own place, hewed at his own pleasure, and was paid a percentage on the value of the ore he got, after it had been washed and sorted. Contractors and tributers paid for candles and tools used by them, exactly as we find them doing in these Accounts.]

Contracts (die Gedinng).—Caspar Klocker, Ruprecht Wurzer and Christian Böckh have hewed in the Fürdernus* adit of the God's Gift (Gottesgab, Goldscope) mine one "daumel" and finished 4 fathoms, left by Jörg Kössler and Hans Matzler at Christmas, and divide 30/-. They have hewed and finished at the said adit 2 fathoms left by Matzler and Kössler, £10. For their unfinished contract—they having undertaken to hew 2 fathoms for £10 10 0—is awarded £5 10 0. They have turned out 20 kibbles of massy ore (Gantz Ertzt†) at 4d., 6/8.—£17 6 8.

Jörg Kössler and Benedict Effendler have hewed and finished their contract at God's Gift from the water-shaft to the Fürdernus adit, to make a passage, £17 10 0.

Steffan Kalcher has sunk a shaft 2 fathoms under the "Bagpipes" (Sackhpfeiffen) 5 "daumel" high, £12, less advance at Christmas, £9 10 0. He has turned out 34 kibbles massy ore at 4d., 11/4, as well as shaly ore (Schifer Erzt) 52 kibbles "auf Hn.Arbeit" (on time work).—£10 1 4.

Martin Ernwallner had to hew 1 fathom at St. Lienhart's for £5 10 0; unfinished, £3 10 0.

* The Fürdernus adit (Stollen), the Bagpipes, St. Leonard, the Frankenstein, the Hamlin (? wether lamb), St. Peter, and other names subsequently mentioned were various workings of the God's Gift mine.

† Later on called "ganz kiss erzt," i.e., kupferkies, copper pyrites. Mr. John Postlethwaite, whom I consulted on this point, writes:—"Copper pyrites or sulphide of copper is the proper mineralogical name of the ore obtained at Goldscope Mine, and the *massy pyrites ore* would be the very best quality, where it was found in considerable bulk in the vein and could be dug out quite pure, without any admixture of quartz or slate. The *schiefer* or shaly ore would be mixed up with, or ramified through, the slate, quartz and vein-material; this would necessarily be less pure than the massy pyrites ore, because in chipping it out a little slate and quartz would get broken with it. Then *colbenbruch* would be the remaining mixture of ore and rock, pounded or stamped almost to powder and afterwards separated by washing." The *Kolbe* (club), no doubt, was the bucket described above.

Hans Hellensteiner has hewed 1 fathom at St. Lienhart at the Veldort (field-place, ? surface), £5 5 0, and turned out 3 kibbles massy ore at 4d., 1/-.—£5 6 0.

Jörg Kössler and Hans Matzler have won at the Fürdernus adit 32 kibbles massy ore, 10/8, and "auf Herrn Arbeit" 31 kibbles shaly ore (schifer ertz), and 50 kibbles Colbenbruch (broken stuff poor in ore).—10/8.

Tributing (Die Lehenschafften).—Foelix Wallner, Balthasar Moser, Lienhart Prugger, Jori Schwaiger, Andre Reindel, Michel Krempacher, Martin Berger and Hans Matzler* have shared at God's Gift by the Christmas accounts 419 kibbles massy ore, 139 kibbles shaly ore and 50 kibbles Colbenbruch, part of which was paid for, leaving £7 15 2. Further, 309 k. massy ore at 1/10, and 160 k. shaly ore at 4d., and are owed for ore won but not yet sorted.—£64 15 0.

Benedict Effendler, Christian Böckh, Hans Underweger, Caspar Klocker and Ruprecht Wurzer† have shared at God's Gift in the middle working by the Christmas accounts 45 k. massy ore, 102 k. shaly ore, 44 k. Colbenbruch, partly paid, leaving 7/8.

* Felix Wallner married Eva Stilt, 1566-7, and had children at Keswick, Daniel 1568, Leonard 1570, John 1572, Agnes 1575 (died infant), Philip 1576.

Balthazar Moser married Janet Bulfell of Keswick 1567 and had a son Mathew 1577. Balthazar was buried at Crosthwaite 1588.

Lienhart Prugger ("Leonard Prowker") married another Janet Bulfell of Keswick 1568 and had sons Leonard 1569, Gawen 1571, Ulrig 1573, Emanuell 1575.

Hans Matzler ("Hance Matchler") and Barbary his wife had children, Elizabeth 1565, John 1573.

† Christian or Christopher Beckh or Böckh married Esaybell Bewley 1560, and baptized Urwyne 1569, Barbary 1571, Katharen 1573, Yeiltd (? Veit) 1576. Also the Crosthwaite Registers record that Christopher Beck and his wife Mary baptized John 1588; and Christopher Beck and his wife Janet baptized John 1590 and Sebastian 1594. There were English Becks also at Keswick. Robert and Peter Beck the clergymen were not Germans.

Hans Underweger married at Crosthwaite 1567 Barbara "Gompenryderin," i.e., Kumpandreiterin.

Caspar Klockher or "Gaspar Clocker" married at Crosthwaite Mabel Bulfell 1568, and had Christopher 1570, Maybell 1571, Annamaria 1575, [John] Fronli (Veronica) 1584, Bartel 1587, Gaspar 1590. Gaspar C. senior was bur. Crosthwaite, April 9, 1594, and Mabel his widow Dec. 1, 1610, having lived at Parkside with John, who therefore seems to have been her son. John or Hans C. mar. Bridget Liteltale 1606; they lived at Stonycroft and then at Parkside (Newlands), and had Jenett (1608), Mabel 1611, Joseph 1614. Christopher C. mar. Alice Stanger of Skelgill 1590, and had Bartholomew 1592 (who mar. Mabel Mackereth at Coniston 1617, and had a son Christopher born and died 1618), Katheren 1594, Christopher 1597; then at Coniston a son not named, bapt. Dec. 20, 1599; then at Crosthwaite, John, bapt. Sept. 12, 1602; and again at Coniston, Gaspar 1604, Annas 1608, and Mabel 1612.

Ruprecht Würzer may possibly have been "Rubrigg a duchman" who married at Crosthwaite, 1568, Jane Lenn, servant at Keswick. But there were other Ruprechts to whom this might apply.

Niclaus Schram, Jörg Reichel and Hans Paintdner,* at the third and upper workings at God's Gift [similar details omitted] £11 8 6.

Hans Opperer, Hans Moser, Hans Paintdner, Hans Mair of Radstadt, Steffan Nuspaumer and Niclaus Schram† at the middle and upper workings at God's Gift, £33 8 2.

Thomas Schöpf, Jörg Silbereisen‡ and Jacob Hofer at the Bagpipes, £3 2 10.

Hans Dierickh and Jörg Colmanstetter, at the Frankenstein, 12/-.

Petter Linsperger, under the Frankenstein, towards the beck, 5/9.

Petter Linsperger and Hans Hammel, near the Frankenstein, £9 18 4.

* Niclaus Schram (in the Register "Schromm, Schrohme") married Agnes Gaitskell of Keswick, 1569, and had sons John 1571, Thomas 1573.

Hans Paintdner's wife Barbara Paintdnerin is mentioned, 1569, in these Accounts.

† Hans Öpperer ("Hance Upperer, Hupparay," etc.) married Katharine Atkinson of Crosthwaite 1567, and baptized Janet, born and died 1568. John 1570, Janet 1571, Mary 1574, Marcus 1583, Magdalen 1588. Hans was buried at Crosthwaite 1588.

Hans Mair of Radstadt (border town of Styria, under the Dachstein), as "Hance Mawer" in Crosthwaite Register, had a daughter Janet 1569 by Agnes Fysher of Crosthwaite, and by Agnes his wife, Annamaria 1574.

Steffan Nussbaumer ("Norspalmer, Lucepalmer," etc., in the Register) and Janet his wife had children, Hans Leonard b. and d. 1572, Annamaria 1573, Kathren buried 1586. He was buried Feb. 2nd, and his wife Feb. 11th, 1587-8.

Hans Moser married Elizabeth Clark of Newlands 1567, and had *Martin* 1567-8, Balthazar 1570, Esaybell 1571-2, Janet 1574 (d. 1577), Francis born and died 1575, *Thomas* 1577, Janet 1580, Magdalen 1583, Fronick (Veronica) 1587. HANS M. of Newland died 1593. His eldest son *Martin* had by "Esabell" his wife Ulrich 1592, and by "Elizabeth" his wife Christopher 1593 and Jane 1599; he reappears at Coniston with a wife Annas (bur. at Coniston 1610), and their children were Ann 1601 (bur. Crosthwaite 1612), Elizabeth 1604, Hans 1608, Thomas 1609. *Martin's* brother *Thomas* had a dau. Jennett (b. and d. 1599) by "Ayllis Davyd wedowe" at Newlands; then he appears at Coniston, where he and his wife Elizabeth had children Jennet 1606 (bur. Coniston 1609), Elioner 1608, Phroniki or Phronilie (Veronica) 1610, Annas 1613, Janet 1616 (bur. Coniston 1618-9).

‡ Georg Silbereisen, perhaps the same surname with the "Mary Purisyngeduchwoman" who married Hans Dempf 1570.

Hans Dierickh, later written Türeckh, was the John Dereck, duchman, who married Janet Wilson 1567.

Peter Linsperger; Linsperg is in Lower Austria, near Pitten.

Hans Hammel married Rachel Pennington of Brigholme 1568 and baptized Daniel 1569. He died 1571, but is not buried at Crosthwaite.

Georg von Syber ("George Sever, duchman") had a son John by one Agnes 1567; he married "Ann Fernayly, singlewoman and Englishwoman," 1567-8, and they had a son George 1568. He was dismissed in disgrace 1574.

Eberhard Weitgassner, as "Edward Gosper, Quitgasser," etc., married Esaybell Garnet 1567, and baptized Agnes 1568, Barbara 1570, Marcus 1572.

Georg Pühler ("Yorl Peller") and Dorothy his wife baptized Margaret 1584.

Hans Hammel, under the Frankenstein, £1 10 2.

Hans Richter, near the Hamlin, £3 5 0.

Jörg von Syber and Martin Ernwallner, near St. Lienhart, £1 18 0.

Eberhardt Weytgassner and Michel Carius, near St. Lienhart on the upper working, £11 13 7.

Jörg Reichel and Jörg von Syber, near St. Lienhart under the adit, £15 2 2.

Ulrich Schlegel and Symon Buchberger, near the Hamblin, £6 9 1.

Jörg Pühler, near St. Peter, between the Hamblin and St. Lienhart, £13 15 0.*

Sorters or Pickers (Schaidler) — Jörg Wyser sorted at God's Gift, 643½ kibbles massy ore at 5d., 432 k. shaly ore at 2d. and 216 k. Colbenbruch at 1d. — £17 18 1. J. Wyser and Caspar Fanginger, with arrears for last term, £13 9 2; they pay their sorters (assistants?) £18 10 4. Jhon Hagrig and Jhon Hitzeson (Hutchisson) near the Bagpipes and the Frankenstein, £7 11 10, and their sorters £4. Jhon Tambson, near St. Lienhart, Hamblin and St. Peter £8 0 10, and his sorters £8 1 0.

English day-labourers for carriage of wood at the buildings (Gebewen) on time-work (auf Hn. Arbeit) 190 shifts at 2d. — £1 11 8. Carrying iron to the smithy in Borrowdale, 56 days at 8d. — £1 17 4. English workers sweeping and carrying ore from the workings, 1009½ days at 5d. — £21 0 7½; 509½ days at 4d. — £8 9 10.

Emptying the water-shaft at God's Gift, 6/8. New iron-ware, tallow, drag-troughs (Schlepp trög) and other mining implements, carriage from Smelthouses to Newlands, 15/9. Leather straps and 6 leather buckets to draw water, 5/4. 2 shaft-kibbles (Schact kübel) 2/-. 4 tin lanterns 2/-.

Wolff Prugger, 38 days at 8d, cutting boards for water-courses (berg truchen) and drag troughs, £1 5 4.

* Making up these figures, we find that the earnings of the miners were very uneven. For 8 weeks' work Pühler, the last, is first with £13 15s.; Paintner got £12 6s. 2½d.; Reichel, £11 5s. 3d.; Kalcher, £10 1s. 4d.; and Kössler, £9 os. 4d. Thirteen men took £8 odd each, seven took £5 odd each, and two took £4 odd each. The foreman got only £4. To three men was paid £3 odd apiece, and to two £1 odd each. Seven received less than £1, down to Underwyger who received only 1s. 6d.; but of these two were well paid in the Smelthouse. No doubt some of these were off work, but still there is great inequality in the returns. The old truck system enabled the less lucky to go on from term to term without starvation, but one sees here already the modern difficulty which has suggested the demand for a minimum wage.

Two Englishmen employed by Wolff Hund* in the smithy at Borrowdale, 10 shifts at 5d.—4/-. Two days carrying lime to smithy, 8d. Three boat loads of wood for the Stamps, Borrowdale to the Vorbarckh† for carriage to Newlands, 1/6. Two great ropes, 3/-. Hans Reütter, sundries for mine, 7/8. John Bu (Bull) as foreman of the [English] men at Newlands, for 2 terms, 5/-.

Total expenses of Newlands, £322 19 4½

Smithy, for contractors and tributers at Newlands.—50 lb. steel, 10/-. Work for the mines, £1 8 7. 300 big nails, 3/-. Tallow, 43 lb. at the mine and 18 lb. at the smithy at 4d, £1 0 4. For Smelthouses; iron £13 14 4; work on the cart, 6/-; for time-work, 18/-; tallow 14/8.‡

Charcoal.—74 sacks at 28d. for the smithies, £8 12 8. Carriage to Borrowdale, £1 13 10.

Men's Bathroom.—Iron used by Hans Setzenstollen £2 9 0.

Iron used by Anthony Dediman in prospecting for coal, namely for stamps (Pucher), iron fittings (Setzeisen), hammers (Judenhämer), scrapers (Kratzen), etc., 11/10.

Martin Kendler, "cynfarer" (? dialler), 8 weeks' wages at 15/- and Hans Reitter, § mine manager, 8 weeks at 10/-—£10.

Buttermere (Puttermor).—Andre Torer|| has turned out at his tribute-work 120 kibbles massy ore, of which he has still to be paid for 40 k. at 2d.—£4; also 100 k. shaly ore on which the balance due to him is £2 6 8.

Dickh Kupperer (? Cooper) has sorted 120 k. massy ore at 3½d., £2, and 80 k. massy ore for Dorer at 3½d., £1 3 4.

Smithy.—This term the cost of smiths' work to be deducted from miners' pay is £12 14 11, and they were supplied with 1177 lb. iron at 2½d., £12 5 2; and 300 lb. tallow at 4d, £5. The men are to be credited with old iron returned, 130 lb. at 1d., 10/10.

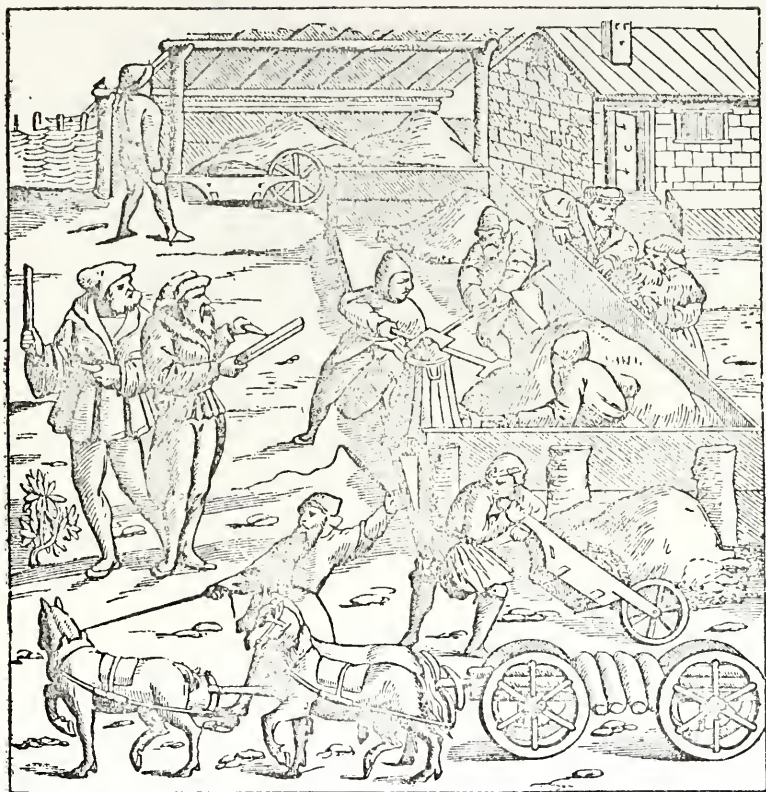
* Wolfgang Hund, smith ("Wilfull, Wilfray Hunde"), married Agnes "Frellerke" 1570, and buried dau. Barbarye 1570-1. Agnes was buried at Crosthwaite 1572, and W. H. married Elizabeth Bulfell of Wythbottom (Wythburn) 1572-3, and buried a son John 1573. W. H. died 1573.

† This must mean down the lake to Copperheap Bay at the end of Fawe Park.

‡ Contractors and tributers paid for their own candles and for new tools or "fettling" blunted or broken tools. Day labourers had tallow and iron free. Hence these two entries in common form after each set of mine expenses; and see the next entry under "Smithy." Mr. J. W. H. Barratt, of Holywath, tells me that this system survived to the end of the period of copper mining at Coniston.

§ Elizabeth, daughter of "John Riter," was baptized at Crosthwaite 1565. Spelt also Reütter, Reuter, etc.

|| Andrew Torer and Aprell his wife had daughters Eve 1571 and Katherine 1574. He is also spelt Dorer.



SORTING THE ORE: the two masters on the left are trying the "streak" on the touchstone. From Munster's *Cosmographia*, Basel, 1552, a copy of which was among the books at Keswick at this time.



THE WOODS OF THE MOUNTAINS OF THE NORTH
OF THE MOUNTAINS OF THE NORTH

Our smiths' wages.—Wolff Hund, 8 weeks 2 shifts at 9/-. Hans Setzenstollen, 8 weeks 7 shifts [*sic*] at 10/-. Petter Kolseysen,* 8 weeks 6 shifts at 10/-. Andreas Ringseysen, 8 weeks at 7/-. Parsevel Hu, 8 weeks 6 shifts and arrears at 4/-. Arrears to smiths £1 16 8. Man at 4/- a week, 2/—£20 1 2.

Smellers' wages.—Matheus Obersteiner, 6 weeks 4 shifts at 10/-; Jorl Staudacher,† 6 w. 2 s. at 9/-; Ulrich Stampfer, 8 w. 4 s. at 9/-; Thomas Wallner, 8 w. at 9/4½; Petter Holdbeintner, 8 w. at 9/-; Bastel Zaissacher, 8 w. 3 s. at 9/-; Jörg Deufferer, 8 w. 12 s. [*sic*] at 9/-; Barthel Fürenberger, 8 w. 3 s. at 9/- and 8/- extra; Ruprecht Schrottenberger, 8 w. 4 s. at 8/-; Barthel Böllinger, 8 w. at 8/-; Hans Altschmer 8 w. 1 s. at 8/-.—£39 6 0.

Building.—Wolffgang Prugger, carpenter, overtime 17 shifts £1 6 11. Hans Regauer, 5 weeks at 9/-.

Stamp mill at Newland.—Christian Bodner, 8 weeks quarrying long stones and taking them to the Stamp at 5/6. W. Prugger, 5 days 7/11.

* Peter Kolseysen, Kolsseisen, etc. (the surname is represented in the Crosthwaite, Coniston, and Grasmere Registers by "Colsison, Cilzizin, Colizing, Cilizing, Collizson, Colizon," etc.). He married, 1570-1, at Crosthwaite Eliz. Walker of Dalehead; their children were Agnes 1570, Magdalene 1572, John 1574, Peter 1576, Elizabeth 1579. Of these, Peter and his wife Mary had Dorathye 1605, Alice 1607, Peter 1608; at the last date the father is called "Petter Collizon in Keswick, drumer." In 1615 at Coniston Peter Cilzizin mar. Annas Rooke, and at Grasmere, Mabel Citizing (Cilizing) of Loughrigg was bur. 1644. At Crosthwaite, Nov. 28, 1591, Fitsins Colsison of Keswick mar. Janet Puphparker, and Jan. 4, 1595, Fitzin Colizon of Smeltinghouse was buried. Alice Colizon mar. William Thompson at Crosthwaite, 1604; and on Jan. 30, 1607-8, Isabell Collizson was bapt., dau. of John and Jenett his wife, "Travellers."

Andreas Ringseisen is the "Andrew Ringrisle" who married Elizabeth Fisher of Seatoller, 1567, at Crosthwaite, and baptized Marcus 1573, Andrea (daughter) 1575.

† Georg Staudacher (Staudach is south of the Chiemsee) is possibly the Yorle (= Jorl, diminutive of George) "Flowerer" who with Antle his wife baptized Barbara 1570 at Crosthwaite. "George Yorle and Agnes his wife" baptized Agnes 1571. "George Yorle and Agnes his wife" baptized Janet 1573.

Bastel or Sebastian Zaissacher (I notice the name Zisacher as still owned in the neighbourhood of Villach) is the "Wassy! Sawser, duchman," who married Margaret Hodgson, 1568, at Crosthwaite.

Barthel Fürenberger or Pürenberger (Führenberg is near Ischl), or "Bartholomewe Beyrnarker," and his wife Barbara baptized at Crosthwaite Martin 1570 and John 1572.

Ruprecht Schratzenberger (Schrattenberg is on the Mur in Styria) might be the "Rubrigg" already noticed, p. 41.

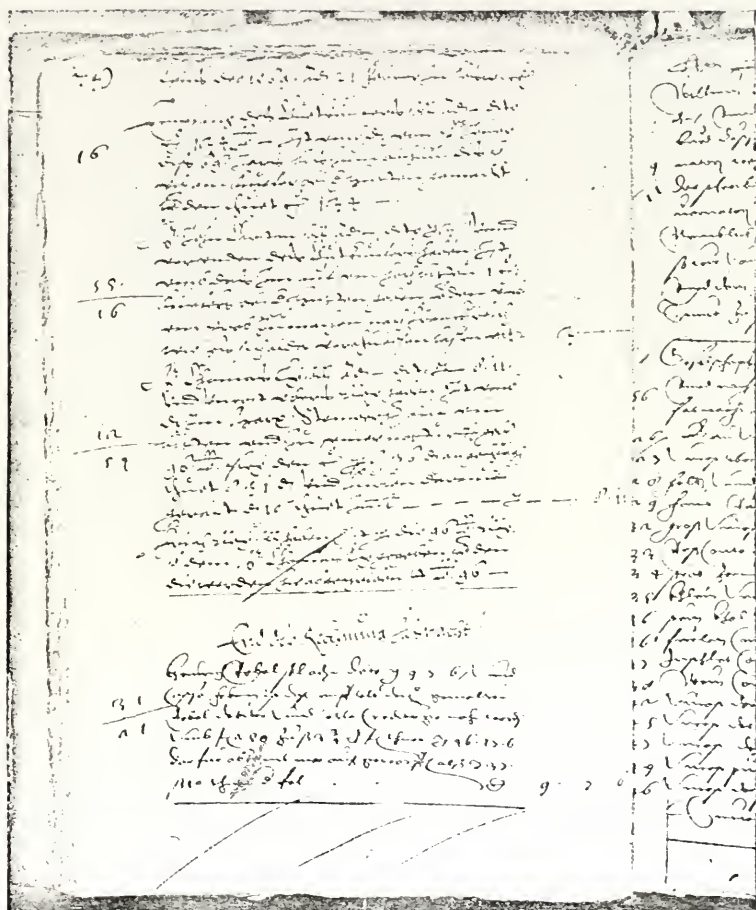
Barthel Böllinger or "Bartholomew Pelimer" was buried at Crosthwaite 1570.

Hans Altschmer had a wife who later appears to have gone into the service of Mrs. Hechstetter.

Ulrich Stampfer married Janet Atkinson of Keswick 1569, and was buried in Crosthwaite Church 1606. Stampfer was also an English name at Keswick. Stampfer is found now near Villach.

The first of these is the fact that the
 country is a very fertile one, and
 the soil is very rich. The second
 is the fact that the climate is very
 healthy, and the air is very pure.
 The third is the fact that the
 people are very industrious, and
 the country is very well governed.
 The fourth is the fact that the
 country is very well situated for
 commerce, and the people are very
 friendly to strangers.

The fifth is the fact that the
 country is very well situated for
 agriculture, and the people are very
 fond of the soil. The sixth is the
 fact that the country is very well
 situated for commerce, and the
 people are very friendly to
 strangers. The seventh is the fact
 that the country is very well
 situated for agriculture, and the
 people are very fond of the soil.
 The eighth is the fact that the
 country is very well situated for
 commerce, and the people are very
 friendly to strangers. The ninth is
 the fact that the country is very
 well situated for agriculture, and
 the people are very fond of the
 soil. The tenth is the fact that
 the country is very well situated
 for commerce, and the people are
 very friendly to strangers.



A PAGE OF THE KESWICK "JOURNAL" OF 1569
(reduced).

TO FACE P. 47.

Ore raised.—Massy ore, 121.4 kibbles at 1½ cwt. (centner) to the kibble = 1821 cwt. Shaly ore, 799 k. at 150 lb. to the kibble = 1070 cwt. 10 lb. Colbenbruch (? poor stuff for the Stamp) 742 k. = 993 cwt. 84 lb. *Ore smelted* since Christmas.—Massy ore 192 cwt. *plus* 1509 not reckoned in last account, = 1701 cwt. Shaly ore, 119 cwt. *plus* 75 cwt. 84 lb. = 194 cwt. 84 lb. Copper made, 34 cwt.

Mr. John Tarston at his request had 1 cwt. copper for an assay in France, value £3. Mr. Thomas Ly (Lee) at his request had from Marx Steinberger 96 lb. lead at 8/6 the cwt., with carriage 8/11.

End of the Shrovetide Reckoning.

Total expenses of the term, £685 os. 10d.

[Four pages of balancing and summaries by Loner not printed.]

1569. EASTER RECKONING (RECHNUNNG OSTEREN).

Feb. 24. T. Thurland and George Lamplugh have delivered 2108 seam of charcoal at 28d. since Aug. 20, £245 18 8.

Building.—Wolff Prugger, lime, carriage of same from Brickhem (Brigham on the Derwent) to Smelthouses, 3 ladders, etc., £6 7 9½.

Wood.—We bought from Miledi Catharina Radcliffe all her wood called Baras (Barrow) from the Barckhs (Parks) toward Borrowdale, containing 150 oaks, 300 ashes and about 800 birches; the agreement was signed by the trustees of her children, Mr. William Mallori* and Thomas Thurland, in the presence of Jhon Tarston, Richardt Duedle (Dudley†), Joris Lample (G. Lamplugh) and Mr. Sackhfield; and owe Ser Joris Radcliffe £33 6 8.

Horses.—We take the pasture in the Barckh (Park) from my lady for 6 years from May 1 next for horse-pasture and hay at £8 a year or £48, of which two payments of £16 to be made this year and the rest in 1575. The trustees of the children sign this also.

March 6. Robert Byndlas sends us by Jhon Bulfeld £60.

March 7. *Building.*—J. Scot; Jaems Bible (Peobles‡) stone-

* Sir George Radcliffe married Catherine, daughter of Sir John (or William ?) Mallory; see C. & W. *Transactions*, N.S., IV., p. 313.

† Richard Dudley, in 1570 superintendent of the mines on behalf of the Queen. He was probably the nephew to whom Lady Alice Radcliffe, died 1554, left a silver gilt cup; also the owner of Yanwath (C. & W. *Transactions*, IV., p. 306); whence his interest in Keswick and the Radcliffes.

‡ In an entry not printed he is mentioned as "Jaems Beblas of Piret" (Penrith). The Penrith Register, Ed. George Watson, gives the marriage of James Peobles, Feb. 10, 1567-8.

cutter, for a cornice (Krantz) of cut and squared stones, 40 feet in circumference, at 18d. the foot, to finish off the refining furnace (Treibherdt), £3. Ulrich buys 1400 nails in Penrith (Pireth) 11/8.

March 9. *Wine*; claret and Rhenish, casks and carriage from Newcastle £5 16 2. Mr. Petter (Schenckel) to Newcastle, and horse-hire, his own horse being ill, £2 19 3.

March 10. Thurland leaving for London settles accounts with D. Ulstet; he has left in his house and at my lady's 5 hogshead of beer at 13/4, etc. Three Dutch chairs sold him at 13/-.

March 11. Hans Radermacher (Gillis Hoffman's agent in London) sent us by Robin Fletscher [our messenger] £100.

March 12. *Building*.—J. Scot. Slates at 6/- the thousand. Jhon Dickhson for heightening the water-trench by the weir and clearing away what the ice had carried down upon it, £1. 11½ skep of lime at 17d. Glazing the assay-chest in which the corn-weights are kept, 3/4. 2 pecks salt 1/-.

Carriage of ore—128 kibbles from Buttermere, £3 4 0.

March 14. Gillis Hoffman sent by John Gräve our messenger £60. Petter Schenckhel for journey to London after 4 years' service from Dec. 3, 1564, also balance of salary and gift £17 0 5.

Building.—J. Scot; Meils Wilmson, carriage of slate from Applethwaite; Robert and Edwart Gyrbi (Kirkby) slaters; two women making 60 sacks at 5 for 4d.; Wm. Stupp, carriage of great stones by water, etc., £9 11 5.

Smelting.—Crusher and 4 English workmen: 3 great water-tubs and water-kibbles; J. Bulfeld for a calfskin and small nails for hand-bellows; 4 great pots for experiments.—£1 7 8.

Carriage.—Old Stable brought from London 1 barrel with £200 in coin and 3 great books for the English bookkeeper [R. Ledes]; a bag with clothes for the English book-keeper; 4 reams paper, and a basket of oranges, £1 1 10. Also 18½ sheets of iron for the refining furnace (Treibherdt) £2 7 4.

Featherbed and bolster for Hans Wautter and 3 white striped bedcovers, £2 10 0.

March 22. John Hudgeson paid £50 on a bill of exchange in London at 5 days from presentation.

March 24. *Building*.—Wolffgang Hochholzer,* carpenter, wages for 6 weeks owing from last term £2 5 0; also for making

* Spelt in Crosthwaite Register "Wyllfray Houghwylser, Howwlser, Haughulser." He married Janet Bowman 1568, and baptized Janet 1569, Thomas 1572.

the crushing-stamp (Gestübstampf) outside the Smelthouses, and setting up 4 shoots (Schiesser) £6. Wolfgang Prugger, carpenter, contract for heightening the two upper furnace-sheds to the height of the others, and all without any help, at his expense as far as applies to carpentry and setting up, £4 10 0.

March 28. *Building*.—W. Hochholzer has lengthened the pier at the Lake, 10/-

Smelting.—Dog's keep, 5/-, etc.

March 29. Anthony Duckhet was paid on his share in the Co. to Wm. Pürdt (Burd, the treasurer) in two instalments £50.

Travelling.—U. Frass bought in Keswick 30 bushels malt at 3/10 to 4/2, and $\frac{1}{2}$ bushel wheat 2/10, 32 lb. hops at 5d. Brewing 6 hogsheads of beer 2/-.—£6 17 6.

March 31. Mr. John Tarston lent us £40 on our note of hand, witnessed by John Wilnson, shopkeeper, and Robert,* my lady's chaplain (der Miledi Pfaff).

Ap. 4. *Building*.—J. Scot cleaving laths, 4/2; his son making cart wheels, 5/-; 3 shifts at 10d. making a clearance before the smithy to set up the furnace; lime; clearing stones from ground at Smelthouses; making path to the Stamp, etc.—£6 14 6.

Smelting.—5 English men at 6d.; wood cutters; carrying charcoal to the coal-shed; boatload of stone; chips (Speen); kelp —£2 3 5.

(Received in Angsburg, May 8, 1569, from Keswick.)

April 9. *Wine*.—4 barrels claret of 40 gallon each, and 4 of 20 $\frac{1}{2}$ gallons at 16d. the gallon; 2 barrels of 20 $\frac{1}{2}$ gallon at 8d., and carriage.—£5 18 10.

House.—7 $\frac{1}{2}$ ells canvas to go over a bed in the chamber above the assay room; 11 $\frac{1}{2}$ ells grey fustian at 10d. and 4 ells linen at 6d. for the same; 11 ells canvas in the kitchen to wipe the fire-place and tins.—16/11.

Rent.—Parseval Radclieff, bailiff, for bedroom occupied by Marx Steinberger and Lienhart Stamler, Jan. 1, 1568 to Jan. 1, 1569.—19/-.

Horses.—H. Reinbrun has contracted with Petter Abeckh (Peter a' Beck) for 30 loads of good summer hay each year for 12 years.—£19.

Ap. 11. *Building*.—J. and Thomas Scot, cartwheels; R. and E. Kirkby, slaters; John Bugar (Buckbarrow) to carry muck

* ? Robert Beck, afterwards vicar of Crosthwaite.

from stables to manure the ground by Smelthouses ; Bailey Radcliff to plough, sow and harrow it ; $3\frac{1}{2}$ bushels oats at $2\frac{1}{2}$ for seed. J. Scot, a gate to the Vorbarckh (Fawe park) and to fix the posts and hang the rails of two already there ; John Vischer (Fisher), waller, to wall up a great window and door in Thurland's house ; workmen to stir mortar.—£6 14 5.

Smelting.—Willm Athaw who breaks up peat, coal and lime, etc., £6 13 8.

Newlands stamp.—£2 1 11.

Men's Bath.—Glazing window in porch, 7 feet at 11d. ; W. Prugger fixing waterpipes ; waller building a porch ; Israel Waltz for 200 nails $1\frac{1}{2}$.—£1 19 10½.

Drapery.—"Carisea," fustian, "Mucheyar" at 16d. and 18d. the ell ; satin ; sewing silk, $\frac{1}{2}$ ounce 1/- ; sackcloth, linen, coarse canvas.—£5 10 6½. Bed cover bought, 10/-.

Men's families (in Germany).—P. Holdbeintner's wife ; H. Hellensteiner's father ; J. Kolmanstetter's wife ; M. Ernwallner's mother ; W. Prugger's wife ; A. Reindel's wife ; J. Reichel's wife ; M. Krempacher's wife.—£7 17 1½. The late Jobst Stoltz's widow £3 12 0. Jörg Lachenmair sends an account, July 3 to Dec. 31, 1568, by which it appears that the following men's remittances have not been charged to them in full—J. Deüferer, P. Holdbeintner, W. Prugger, H. Hellensteiner, M. Ernwallner, A. Reindel, M. Krempacher ; in all $17\frac{7}{8}$; also the wives of J. Kolmanstetter and J. Reichel, £4 12 3. The following started for Keswick Feb. 24, 1567, and left families at home,—J. Stoltz, P. Holdbeintner, J. Deüferer, J. Colmanstetter, T. Wallner, H. Hellensteiner, M. Ernwallner : and the following came Sept. 1, 1567 leaving families,—W. Prugger, J. Reichel, A. Reindel, M. Krempacher : the total paid out has been 594 florins 24 kreutzer, whereas only 548 florins 20 kreutzer has been deducted from their pay.

Ap. 11. Cuttbert Mossgraff Schriff (Cuthbert* Musgrave, Sheriff), on bill of exchange £20.

NEWLANDS.—*Time-work*.—H. Häring, M. Berger, M. Ernwallner, "John Englisch" † (4 days), J. Staudacher, B. Fechtenbach.—£6 15 11.

Contracts.—C. Klocker, R. Wurtzer and C. Böckh, 2 fathoms at the Fürdernus adit, etc.—£12. J. Pühler at the Hamblin, £5. M. Ernwallner at St. Lienhart, £2.

* Sheriff of Cumberland, 10 Eliz. Simon was Sheriff next year.

† A John English was married at Penrith, July 24, 1580.

The first of these is the fact that the earth is not a perfect sphere, but is flattened at the poles and bulged at the equator. This is due to the centrifugal force of rotation, which tends to pull the material of the earth outwards at the equator. The second is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core.

The third is the fact that the earth is not a static body, but is constantly changing. This is due to the fact that the earth is subjected to various forces, such as the forces of erosion, sedimentation, and tectonics. These forces are constantly at work, and they are constantly changing the shape and composition of the earth. The fourth is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core.

The fifth is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core. The sixth is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core.

The seventh is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core. The eighth is the fact that the earth is not a uniform body, but is composed of different layers of material, each of which has a different density. This is due to the fact that the earth has been subjected to various processes of differentiation, such as the separation of the crust from the mantle, and the formation of the core.

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Tributing.—J. Kössler* and B. Effendler at the *Fürdernus* adit, have cut out the middle from the front shaft inwards; 101 kibbles massy ore, 93 k. shaly ore and 90 k. Colbenbruch.—£17 1 6. F. Wallner, B. Moser, L. Prugger, J. Schwaiger, A. Reindel, M. Krempacher, M. Berger, and H. Matzler have cut in the shaft at *God's Gift* 354 k. massy ore, 201 k. shaly, and 191 k. Colbenbruch; also 800 k. massy ore and 200 k. shaly; and have cut down a great wall (of rock).—£70 11 10. H. Opperer, H. Moser, H. Paindtner, H. Mair of Radstadt, H. Unterweger, S. Nusspaumer and N. Schram.—£39 3 0. H. Dierick and J. Colmanstetter at the *Frankenstein*, £12. H. Hamel and P. Linsperger, £14. J. Hofer, J. Silbereysen, T. Eysel and P. Mair at the *Bagpipes*, £24 6 2. H. Richter at *Hamblin*, 18/3. H. Richter and H. Hellensteiner at *Hamblin*.—£1 4 0. U. Schlegel and S. Buchberger at *Hamblin*, £7 12 9. J. Pühler at *St. Peter*, £5 7 9. J. von Syber and J. Reichel at *St. Lienhart*, £10 18 4. E. Weytgassner and M. Carius, at *St. Lienhart*, upper workings,—£9 3 11. M. Obersteiner and J. Staudacher above the *Bagpipes* in the *New Cut at St. Dun el.*—£16 10 0.†

Sorters.—J. Wyser and C. Fanginger at *God's Gift*, £20 16 8. Jhon Hagrig and J. Hitzeson (Hutchison) at the *Bagpipes*, £6 14 4 and £4 14 2. J. Tambson (Damson) at *St. Lienhart*, *Hamblin* and *St. Peter*, £7 19 5.

English labourers—£23 14 5½; making total exs. at Newlands £318 12 5½.

Ap. 11. Steel sent to Borrowdale smithy, and tallow, £1 14 4.

(Received in Augsburg, May 28, 1569.)

Remainder of the Easter Reckoning

[in a different handwriting].

April 11. *Newlands*.—Steel sent to Borrowdale and tallow £1 14 4. Smiths' work for buildings, £4 15 0. Charcoal £8 0 2. Tool used by Anthony Dediman in prospecting for coal, 7/3.

Wages of Kiendler and Reutter, £8 15 0.

* Georg or Jorl Kössler, Kessler, is the "George Casthelr" whose son Daniel was baptized at Crosthwaite 1565. G. and Margaret "Kistler" baptized Ludivicus 1566, Benedictus buried 1567, Agnes 1568 (died 1569), Janet 1570, and Leonard 1571.

† Pühler again heads the list, with £10 7s. 9d.; but the other more successful men of last term have now to be content with smaller earnings. Unterweger gets £5 7s. 10½d., but Hellensteiner only 12s. The other men make sums varying from £8 8s. 11½d. to £2.

U. Frass' account for sundries £4 14 5; shoeing horses 6/9; for cart £8 3 0; for board, beer and travelling £22 12 0½.

Buttermere.—A. Thorcr, 8 kibbles massy ore and 100 k. shaly ore, £9 13 4.

Smithy.—expenses £18 17 6d; 1741 lb. iron at 2½d., £18 2 8½; tallow 246 lb. at 4d., £4 2 0. Wages to W. Hund, H. Setzenstollen, P. Kolsseisen, A. Ringsseisen, Parsoval Huie, Dix Schmidt (Dick Smith), Jhon Huedtschon (Hodgson),—£17 9 2.

Smelters' wages.—M. Obersteiner, U. Stampfer, T. Walner, P. Holdpaintner, S. Zaisacher, J. Deuferer, B. Purnberger, R. Schrottenberger, B. Pelliner, H. Altschmer,—£28 10 0½.

Building, wages.—H. Regawer, £3 6 9; W. Prugger, £1 9 3.

Ore raised: 1124 kibbles massy ore, 991 k. shaly ore, 2498 k Colbenbruch. *Smelted*.—622 cwt. massy ore, 315 cwt. shaly ore, 30 cwt. massy lead ore, 15 cwt. lead, 39 cwt. bought lead ore.

End of the Easter Reckoning.

To God be praise and thanks for ever. Amen.

[Then follow 2½ pages of balancing which shows that the nett expenses of the term were £612 1 2. In the next account, the previous handwriting reappears.]

1569 WHITSUNTIDE RECKONING (RAYTTUNG PFINGSTEN).

April 16. G. Hoffman sends cash by Robin £100; George Lamplugh lends us £13 6 8; Randal Wahr (Ward?) pays a debt of £13 6 8; Christopher Daycklhr (Dacre) deposits £26 13 4 to be paid him in London, 3 days after presentation of our bill of exchange (Wichsel b'fflin).

Ap. 17. G. Hoffman sends by Jhon Grave £100.

Ap. 18. G. Hoffman sends by old Stable £200.

Building.—J. Scot making mine-troughs and laths; his son, cart wheels. Robert Benson, carriage of 1 skep lime from Brigham. Hainry Schipper (? Shepherd), making a dry wall (ain truckhes Maur) at the water before the new Smelthouses, and levelling the place, in order to lay a corduroy road:—£1 2 8.

Smelting.—8 assistant smelters, 32 shifts at 6d.; 10 at the two great furnaces (Rösten) at 5d.; 6 stoking with peats; one who cuts up peat, coal, lime, etc. at 6d.; men who deal out the charcoal; gathering and carrying chips, etc.—£3 2 0.

Smithy.—John Corwin at Workington, 1 ton iron £16; carriage of same 14/4 and of nails 3/4. Carriage of 3 boxes of nails from Weccester (Worcester) to Workington 3/—.

Wine.—Ulrich bought from John* Corwin $\frac{1}{2}$ tun Spanish wine £9; carriage 7/- and loading it 1/-. Robert Buggel (Buckle) at Keswick for 24 gallon claret £2 8 0. The constables (Berichtsdienert) for helping to get in wine at various times 3/4. $3\frac{1}{2}$ gallons vinegar at Workington 7/-. 5 gallons vinegar at Penrith 6/8, carriage 6d. From George Corwin, 10 quarts vinegar 5/-.

Tallow.—Ulrich bought 24 lb. candles 7/-.

House.—2 great fire-irons to hold spit, 8/-. 1 great wooden tub to wash linen 1/-. A basket to hold linen 8d. Big stone to grate "Mostardt" on, 3/-. Stone for kitchen use 1/-. 1 toasting fork 1/-. 1 Bretstil (gridiron?) 3/8.

Carriage of ore.—2000 kibbles from Newlands £7 16 3½.

Petty Cash.—Slating our buttery in Mr. Thurland's house £1 1 8. Front door to the same 4/-. Bands and hinges to the same 1/8.

Ap. 25. *Building.*—J. Scot making a lime shed at the crushing works, 5/-. His son, wheels to carry the axle of the waterwheel and "senstöckh" (? Zähnstock, cog bars?) to Newlands, 5/-. John Aleson (Allison) working at the lime house 3/4 etc.

Smelting.—At the ore furnace 18/6; at the stone furnace 15/-. The man who cuts up all horse loads (peat etc.) at Smelthouses, 3/-. Lime, kelp, chips, etc.—£3 3 11.

May 2. *Building.*—John, Wm., and Thomas Scot 12/6; mending roof to charcoal shed, etc. 3/- slater 1/4. Clearing stones from ground at Smelthouses 6/-, mending the road there and clearing the new furnace 3/9; wages 13/10.

Smelting.—Usual items with paste (Kit) to mend bellows 6d; 2 mortars in assay house, 6/- locks 2/- 2 stools in assay house 8d; 6 "Schinfesser" (? Schenckfässer, piggins) 8d—£3 13 8. Tallow £3 14 1.

May 9. *Building.*—J., W., T. and Dickh Scot, and cutting birches in the wood (Swinside?) £2 5 2.

Smelting as usual £4 15 6.

Wine.—From Mr. Corwin, Workington, $\frac{1}{2}$ tun white wine, $\frac{1}{2}$ tun claret, £10. From a Scotchman, 3 tuns £25 10; unloading and taking to warehouse 3/4. Cooper for hoopng casks 6d. Six horses and 3 men to bring one tun to Keswick, 7/10. Carriage

* Mr. John F. Curwen, F.S.A., thinks that this John may have been the cousin of Sir Henry Curwen, though nothing more is known about him. George, who sold the vinegar, is no doubt Sir Henry's son George.

† Two men employed by the Company, in red uniforms, as mentioned later. They were probably the result of the commission granted to Thurland and Hechstetter, July 27, 1565, to apprehend disorderly persons in their service.

of 3 tuns from Workington when our horses were employed in taking timber to Newlands stamp £2 2 0.

May 12. Credit Symon Musgrave £50.

May 16. *Building*.—J., W. and Dick Scot at lime sheds; T. Scot mending daily breakages, Mails Athaw building stone wall round half the ground at Smelthouses; mending watercourses and weir; levelling road with slag in front of Smelthouses,—£1 18 10½

Smelting.—Usual items and Lienhart Schürt (later "Schuet") quarryman for stone for the furnace 4/-, bringing stone by water from quarry [in Borrowdale] 13/4. John Vischer (Fisher) from Thornton (? Thornthwaite) for 12 sacks of horsebones at 8d. to the assay sheds 8/- John Dixson and Richard Nixson collecting chips 4/- etc.—£9 4 7½.

Carriage of ore.—430 kibbles brought from the wood (Swinside) carried from the waterside at Millenstet* £1 12 5.

Tallow from Christoffer Waid 14/10.

Paid the Earl of Northumberland's forester, on Mr Simson's request, for his coal sacks, they giving us four of the best oaks out of the Wood for an axle, £1.

Ulrich Stampfer on his wedding,† on Mr. Ulstet's request £1.

May 20. Jori Pühler, miner, has deposited with us £35 18 4½.‡

Travelling.—Daniel Höchstetter, with three others, spent from Augsburg to Antwerp fl. 33 kr. 21: fares to Speir fl. 30; Speir to Mainz by cart (auf. d. Roll) fl. 5.20; hire of a boat (Nacha) to Cölen, fl. 9.4; hire of a covered carriage§ (von einen Hüttich Wagen) to Antwerp fl. 17. Spent Antwerp to London, £5 3 0; Antwerp to Calis (fares) £2 1 6; passage money across the water £2 6 0; given to a messenger from Tonkirch (Dunkirk) who helped him through|| £1 5 0; Horses from Dover to Gravesin (Gravesend) 16/-. Gravesend to London [by boat] 4/-. Customs at Dover, 16/-. Höchstetter paid our messenger John Grave for expenses to Keswick 10/- and for staying in London 8 days

* Later spelt Midingstedt, the landing place nearest Smelthouses.

† U. Stampfer married Janet Atkinson at Crosthwaite Church.

‡ And starts for a holiday in Germany after his run of luck at Newlands. This term he is paid for three weeks only, i.e., up to May 16, and goes away with a letter of credit enabling him to draw on Haug & Co., in London, Antwerp, Augsburg, etc.

§ "Coaches . . . used in Germany, covered with black coarse cloth lyned with canves or course cloth, and borne vpp with litle round hoopses of wood fastned with hookes of yron, so as the cover falles backward if they will ride in open ayre, or may be pulled over their heads at both ends and buckled in the midst, if the weather be rayny or cold." *Fynes Morison*, ed. Charles Hughes, p. 174.

|| Through France, as Hechstetter perhaps could not talk French.

The first of these is the fact that the British
 Government has been unable to secure the
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at 10d., 16/8. Erhart Greütter, smelter, expenses, 10/-. Mr. Needham's foreman collier, expenses, 10/-.

D. Höchstetter paid Thomas Künigstorffer in Augsburg 15/-; for a dagger, 3/9, and loan 4/6. Three pair shoes, 1 pair slippers, 5/6; tailor 4/5. Two quires of paper, 8d.; sealing-wax and letter-thread, 1/7. Boats on the Thames three times, 1/-; two bound books for Smelthouses, 4/4. Lettuce seed, 4d.; a poor German in charity, 3/-; washing, 1/4; 1 quire of paper, 4d.; sponge, 6d.

Smithy.—D. Höchstetter bought in London from Jaemes Bacon and William Webbe, 5 tons Spanish iron £55; 3 tons English iron, £28; loading iron on ship, 2/8; to the man who helped in buying the iron [? as interpreter], 1/-.

Wine.—D. Höchstetter bought from Mr. Benedeto Spinola 11 tuns Malvoisie, £124 13 4; $\frac{1}{2}$ tun Muscatel, £8 10 0; half to be paid between May 1 and Nov. 1, the rest 6 months later.

D. Höchstetter brought us for Hans Reinbrun from H. Radermacher agent to Gillis Hofman, £200.

Travelling.—H. Reinbrun when he rode to meet Höchstetter at London in March £4 13 0; spent in London £12 12 8; wine 9/-. Chris. Richardson, messenger, to Keswick and 2 days' board, 11/8. Höchstetter's expenses London to Keswick, £5 3 2; 4 horses £8 10 0; postboy, 5/-.

Bought by H. Reinbrun, 20 lb. rice at 3d.; 5 lb. Jordan almonds at 11d.; 10 $\frac{1}{4}$ lb. sugar at 10d.; 56 lb. currants (Mörtreüblin), 8/-; 56 lb. plums, 13/4; 56 lb. little raisins, 18/-; 2 oz. saffron, 2/8; 1 lb. cinnamon, 6/8; $\frac{1}{2}$ lb. ginger, 2/8; 2 lb. pepper, 8/8; $\frac{1}{2}$ lb. mace, 5/4; $\frac{1}{2}$ lb. cloves, 3/6; 1 cask olive oil, £2 10 4; 2 barrels vinegar, 10/9. Taking oil to Stable [the carrier], 4d.—£39 13 6.

House.—H. Reinbrun bought in London 1 small and 1 large baking pan, £1; 4 reams paper, £1 5 0; 1 steelyard, 10/-.

Paid for the Great Seal to the Waterworks,* £1 0 4; for the Signet and Privy Seal, £1; writing and enrolling the privilege, £1 10 0; the examiner and sealer, 1/4; for the Seal in duplicate, £1 0 4; writing the same, £1; examiner and sealer, 1/4; clerk, 3/4; wooden box for the seal, 9d.—£5 17 5.

Paid the Recorder and the Queen's attorney Mr. Ainslaw for the decree in the Corporation £3 10 0; Mr. Pradt paid various clerks in Chancery 10/-.

* In proposing the formation of this Company, Höchstetter had asked for privilege of waterworks for draining mines, etc., and received the patent 1568.

Petty cash.—Messenger from London to the Court for Mr. Pradt, 4d. Washing-bill, 1/4; for seeing a curious calf, 2d.; for cord to tie up a little box to hold the money, 3d.; sending the box to Stable, 4d.; messenger for Mr. Springam, 6d.; string and wax, 6d.

Horses.—Keep, 39 days in London, 19/6; shooing, 1/4; leather girth, 10d.; patching a saddle, 2/-; ostler, 6d.

H. Reinbrun bought a Spanish hat in London for D. Ulstet, 10/-, and paid for G. Lamplugh £13 6 8; to J. Wilmson, shop-keeper, on account £5.

Carriage.—Jaemes Stable £3 11 4, also 1 cask salad oil and £200 in cash, 2/6; pump weighing 2 cwt. 14 lb. London to Keswick, 19/10. Follows what Stable brought us,—Rice, almonds, sugar, raisins, currants, plums, saffron, cinnamon, ginger, pepper, mace, cloves, baking-pans, 4 reams paper, cask of oil, white lead, 1 chest for Gregory Weiss, with rhubarb and other drugs for Lienhart Stamler.

May 22. From R. Bendlas by John Harison of Kendal £40; Mr. John Tarston in payment of a bill of exchange £20.

May 23. *Building.*—J. Scot, water troughs; T. and W. Scot finished the lime shed; Wm. Fiering, 6 skeps lime 9/- and carriage 16/-.—£1 15 10.

Smelting.—Robert Gryg, 7 bushels kelp, 9/4, etc.—£5 8 2½.

Carriage of ore.—£1 1 4½.

Travelling.—Hainrich Röbel and Conrad Heintzelman to London, £3; Heinrich Schnepf for 2 horses for them, £1 10 0.

Anthony Dediman prospecting for coal, £9.

Vicar's Island.—Balance of £60 to John Wilmson; the deed now sealed, £13.

Sent George Lamplugh by his servant, £4.

H. Reinbrun paid T. Königsdorffer in London for a pair of spurs 8d., and a pair of riding-stockings* 3/4.

Charcoal.—Roland Philipson† for his wood called Kauegart (Calgarth) bought in London by the English [shareholders] and assigned to us in entirety, £100.

M. Scheuher and H. Hellensteiner received in London for journey to Keswick,‡ £3 10 0. Richard Ledes, English book-keeper, in London on going to Keswick, £7.

* In Iceland, where travelling on horseback is to-day as it was in England under Elizabeth, thick knitted stockings are worn over the boots for riding.

† According to Nicolson and Burn, one Rowland Philipson died in 8 Henry VIII., and the next Rowland, his grandson, did not succeed until 1631. But here we have a Roland Philipson owning woods at Calgarth in 1560.

‡ They had started for Germany, but turned back at the news of war.

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Charcoal.—Part payment of £300 to Thomas Ly (Lee) for a wood, Isel park (Eyselbarekh)—£100.

Cuthbert Musgrave in payment of bond £20.

Henry Fletscher lent us £50; sold for us draperies, £5 2 0; sold us 56 gallons Spanish wine £5 12 0.

George Lamplugh paid us £4; John Wilmson, shopkeeper, lent us £10; D. Ulstet borrowed through U. Frass £38; B. Effendler lent us £13; H. Häring lent us £12 15 0; G. Hofman advanced to Stable £1 6 8.

G. Hoffman has paid for Höchstetter and Reinbrun the following accounts:—Jan. 31, for the ass brought from France, £2 11 8; carriage by old Stable for 4 hemispheres of bismuth sent in a cask to London and Antwerp, 147 lb., 14/6; and cask to London, 1/1. March 8, exchange (Lagio) on £160 gold at 1d. the piece, 13/4; 3 reams paper, £1 0 2; exchange on £200, 16/8. March 9, John Grave for 7 days [board in London], 15/10; Caspar Loner and Robin, £2.

May 30. *Building*.—J. and W. Scot making stair to charcoal shed. Peat house roofed with sods, 6/6; getting sods, 1/9; rebuilding wall in my lady's wood where we got stone, 3/2, etc., £1 19 5. Rebuilding the old "parlor" in Mr. Thurland's house for Mr. Ulstet—J. Vischer, waller, 15 days at 12d. and 9 at 9d.; mortar, stone, lime and sand; Meils Faschet, carpenter, laying floor, 10/-.—£3 17 10½.

Smelting.—As usual £6 12 7½.

Carriage of ore from the water in my lady's wood* to Smelt-houses, 15/3.

Grasmere Stampworks.—John Crassat (Crosthwaite), carpenter, felling birches and alders (Eldern), 5 days at 8d. Horse for W. Hochholzer, 1/2; 2 water-buckets and wooden tub, 1/6; Rouland Wagger (Walker) carrying iron articles and cut birches to Grasmere, 10/-; dragging 63 oaks from the wood £1 11 6, and 20 loads chips 3/4; carriage of tools, etc., 1/8; cutting planks, 48 days, £2; carriage of 60 thick planks from wood, 12/6. Hari Barckh (Park) bailey at Grasmere, for 27 stones, 2/3.

Newlands Stampworks.—461 days English labour at 6d. digging foundations of stamps and water courses and 27 days at 5d.; our 2 English carters, £1 15 9; English carpenters, 91 days at 10d. to cut 2 axles for waterwheels, a "Senstock," big posts (Seilen) and other timber, as arranged by W. Prugger; W. Fiering and H. Wilnson 25¾ skep lime, £1 18 7½, carriage from

* Crowpark or Cockshot.

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Brigham to Smelthouses, £3 8 8; J. Fisher, waller, £2 0 3; 2 sieves to riddle sand, 8d.; J. Fisher cutting 60 birches at Brandclow (Brandellhow), 5/-; 54 dinners at 6d. for M. Kiendler, H. Reütter and C. Hainzelman, paid to J. Silbereysen,* £1 7 0.—£26 13 6½.

Hans Reinbrun received, March 19–May 19, to disburse for carriage of ore and charcoal and to pay colliers and miners, through U. Frass, £200 14 3. Also carriage of charcoal from Isel, £8 5 4, from Borrowdale £3 19 7; John Fisher, 6 seam from the pitstead to Borrowdale smithy, 3/-, Thomas Heyn (? Hinc) 1 seam from Borrowdale to Newlands smithy, 8d.; making 8 coalsacks, 1/-; making a path in Borrowdale from the fell (berg) to the valley to bring down coal on horses, 10/3; Meils Rig† of Fornes (Furness) 8 loads charcoal, 18/8.—£214 12 9.

Paid out by U. Frass:—Rochius Franck, coat for his boy, £1 10 0; self, 3/10½; Cuthbert Radclieff, rent for house, £3 15 3; R. Franck for his wife, 10/-; Michel Härpfer, £11 10 0; L. Stamler, 11/7½; U. Frass, £2 5 3½; M. Steinberger, £3; C. Heintzelman, £1 1 11; Lady Catharina Radclieff for wood, and loan, £21 10 6½; Mr. D. Ulstet, £18; R. Ledes, £1 12 2½; D. Ulstät, £8; John Sudaych of Grefing, on a bill of D. Ulstät's, £24.

Jörg Wyser before going home from Keswick deposited £45 to be paid through Haug & Co.; Michel Krempacher deposited £12.

Anthony Duckhet paid up the sixth and seventh instalments of his ¼ share in the Company. £35 5 0.

D. Ulstät paid Gregory Weiss when Mr. Fleming was here‡ £1, and in part payment to Sir George and Lady Radclieff for Barras wood £6 13 4 and for the pasture £2. Ulrich has paid Lady Radclieff on 9 accounts £5 10 6½. Lady Radclieff has supplied 9 oaks for Keswick bridge, to be paid for by the parish £3; also 12 oaks at 6/- used for planks at Smelthouses £3 12 0, and 1 "sipling" 4/-, 72 birches £2. Ulrich Frass has paid her £3 4 6.

NEWLANDS.—Wages of H. Häring, foreman, 7 weeks at 10/-; M. Berger for clerk work, 6/-; J. Pühler, 3 weeks at 5/6; B.

* At whose house people from Keswick, on business at Newlands, used to feed.

† Buried at Hawkshead, Nov. 1, 1573, Myles Rigge (Hawkshead Register, ed. H. S. Cowper, F.S.A.).

‡ For extra expenses attending the visit of William Fleming, the "gentleman of great pomp and expense" as West called him, who built Coniston Hall and sold charcoal to the Company. His wife was a Bindloss of Kendal and Borwick.

The first of these is the fact that the
 British Empire is not a homogeneous
 entity, but a collection of diverse
 territories and peoples.

The second is the fact that the
 British Empire is not a static entity,
 but a dynamic one, which has
 changed and grown over the years.

The third is the fact that the
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 interests of the peoples of the
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Effendler at carpentering, 1 week 1 day at 5/6; H. Grumphüler, 4 weeks at 5/6.

Contracts.—C. Klockher, R. Wurtzer, and C. Böckh at *Fürdernus* adit £14, and 9 kibbles ore at 4 for 3/-. J. Pühler has finished his "Veldort" (? work at surface) and contract at the *Hamblin* £3, and 19 k. ore at 4d.

Tributing.—J. Kössler and B. Effendler at *Fürdernus* adit £18 18 4. F. Wallner, L. Prugger, B. Moser, H. Matzler, J. Schwaigler, A. Reindl, M. Krempacher, and M. Berger in the shaft at *God's Gift*, 526 k. massy ore, 360 k. shaly ore, 200 k. Colbenbruch; less advances, £13 1 0.

H. Paintner, H. Opperer, H. Moser, H. Unterweger, H. Mair, S. Nusspaumer and N. Schram, middle working at *God's Gift*, 170 k. massy ore, 128 k. shaly ore, 350 k. Colbenbruch,—£45 1 10.

J. Silbereysen, T. Eysel and J. Hofer, at *Bagpipes*, £12 15 4. S. Kalcher at *Bagpipes*, £12.

M. Obersteiner and J. Staudacher at *Bagpipes*, 16/8.

H. Dierickh and J. Colmanstetter at *Franckenstein*, £18 18 7.

P. Linsperger and H. Hammel at *Franckenstein*, £10 0 6.

T. Schopff at *Franckenstein*, £8 7 6.

H. Hellensteiner and H. Richter at *Hamblin*, £2 1 4.

U. Schegel and S. Buchberger at *Hamblin*, £6 13 6.

Wolff Binder and Reichardt Mitterholtzer at *Hamblin* in the shaft, £5.

J. Reichel and J. von Syber at *St. Lienhart*, £4 13 1.

E. Weyttgassner and M. Carius at *St. Lienhart*, upper working, £4 2 10—also at *God's Gift* on time work.

B. Fechtenbach for a contract at the "Don't know" vein (Waiss nit) called the *W'indenburg* (? windlass castle), £3, and by the Christmas account 26½ days there at 5d.

Sorters.—J. Wyser and C. Fanginger, £25 2 6. J. Hagrig and J. Hutzeson (Hutchison), £13 4 0. J. Dambson, £3 18 7.

English labourers carrying wood, scrap iron, etc.; H. Schiffer (Shepherd ?) breaking up a big stone in the road to Newlands, etc., £26 13 8½.

Total exs. at Newlands, £252 14 0.

Smithy.—Supplied to Newlands 73 lb. nails, wedges for wood-cleaving, etc., £3 6 0; supplied to *Building*, for cart, etc., £16 0 4. Charcoal used by smiths, 35 sacks, £2 0 10. Tools supplied to A. Deliman prospecting for stone coal, 8/1.

Horses.—Shoeing, 8/-; oats, etc., £9 2 0. Note that our horses have taken all the timber to Newlands.

Travelling.—Board and beer, £34 3 2; messenger, London and back, £4 7 5.

Buttermere.—M. Berger and A. Torer for last term, £4 3 4. A. Thorer £6, and for ore raised £4 6 8.

Smithy.—Expenses, iron and tallow, £21 12 7. Old iron returned by men, £5 18 3. Wages:—W. Hund at 9/- a week; H. Setzenstollen at 10/-; P. Kolseysen at 10/-; A. Ringseysen at 7/-; Parseval Huw at 4/-; Dix Schmid at 4/-; Jhon Hori-schon at 4/-.—£24 3 9.

Smelting.—M. Obersteiner at 10/-; U. Stampfer at 9/-; T. Wallner at 13/6—note that Höchstetter has promoted him to the foreman's place held by the late Jobst Stoltz; P. Hold-beintner, J. Staudacher, S. Zaissacher, J. Deufferer, and B. Pürnberger at 9/-; R. Schrottenberger, B. Böllinger and B. Fechtenbach at 8/-; Erhart Greutter and Hans Plon at 4/-.—£31 7 3.

Building.—H. Regauer at 9/-; W. Hochholtzer at 7/6.—£5 16 3.

Horses.—Hans Walsitter our carter at 3/- from March 20, when he set out with Höchstetter from Augsburg, to date.—£1 10 0.

Grasmere Stamp.—C. Podner £2 16 0 with arrears £3 16 0; W. Hochholtzer £10. Thomas Aggrig (Grigg) for wood £1 10 0.—£18 2 0.

Men's families in Germany.—Deufferer's children, 7 weeks, £1 6 3; Colmanstetter's wife, 7 weeks, 15/9; W. Prugger's wife, 7 weeks, £1 6 3; Reindel's wife, 10/6; Reichel's wife, 10/6; Krempacher's wife, £1 1 0.

Draperies.—Supplied to the men, cloth, "Carisea," Fustian, "Macheyar," Satin, Velvet, Taffeta, Sewing silk, Linen, Cordovan Leather £5 14 6, Canvas for coal sacks £17 1 6.

U. Frass received from John Tarston £13 6 8; from men for wine supplied £34 2 2.

Newlands Stamp.—Steffan Mur,* work at the buckers (Kolben—see p. 40), £1 4 0.

Newlands Smithy.—John Fisher, waller, and men £8; digging foundations 74½ days at 5d. and 40 at 6d. Hu Alkorn, carpenter, cutting one rod thin planks, 11/6. John Sanderson, cutting 70 sods, 18/6, and 1 rod planks 11/6. John Fisher building a

* "Steaven Moure, duchman," married Esaybell Wood, 1578, and had children John 1570, Janet 1581, Esabell 1582, Peter baptized 1583 (? died infant), Peter baptized 1590.

dry wall at the watercourses and weir, 12 days at 12d. and 18 at 9d. Willm Fiering, 3 skip lime 4/6, carriage 8/-. John Bugbar carriage of 4 iron plates for the furnaces (öffen) £1 10. Jaemes Benson, slater, getting slates and laying them on roof £2 0 2. Willm Deson bringing 3½ rod 8 yd. (sq. measure) slates at 10/- the rod.—£18 8 5½.

Peat.—H. Reinbrun's account for cutting, drying, stacking and leading to Smelthouses from Jan. 8 to date. Thomas and Christopher Lancaster 1½ hundred (*i.e.*, long hundred) scam (or loads) from Flasco at 4d. John Worn, 22 hund. from Schidaw at 2¾d. Richardt Hudgson and others, 208 hund. from Schidaw at 3d. Arthur Gree, 102 hund. ditto. Scott of Trilket (Threlkeld) 60 loads from Schidaw at 3d., and 60 from Flasco at 4d. Richard Scot 2½ hund. and 19 from Schidaw at 3d. John Worn from Trilket, 1½ hund. and 10 *do.* Thomas Surlby (Sourby) of Trilket, 1½ hund. *do.* Richardt Hudson 60 loads, *do.* "Them of Trilket" [? the Scotts] 1½ hund. and 9 *do.* R. Hudgson 100 loads *do.* John Richartson of Under-Skiddaw, 64 loads *do.* Niclaus Man 20 *do.* Niclaus May [*sic*] 22 *do.* Thomas Carter 190 *do.* Thomas Wilmsen 500 loads from Flasco at 4d. Thomas Canner, 90 from Schidaw at 3d. R. Scot, 135 *do.* Thomas Cannor, 80 *do.* Willm Scot 72 *do.* R. Hodgson 1½ hund. *do.* Willm Scot 73 *do.* John Wilmsen, 1½ hund. *do.* R. Hogson, 98 *do.* J. Wilmsen 2 hund. and 26 *do.* Robert Hogdson 1½ hund. and 22 *do.*—£56 6 10½.

Petty Cash.—H. Reinbrun's account. Clocker at his wedding,* £1. Hainry Lancaster running to Borrowdale, 6d. March 16, going to Cockermouth with my horse, one night, 2/4. June 3, Richard Ledes and I spent at Graistockh, with horses, 4d.

Carriage of ore.—Jan. 8, John Sanderson and Mathew Pepper 34 kibbles from Kolbeckh at 6d. Jan. 12, Bailey Radcliff, 8 loads stone coal at 5d. Richardt Hogdson, 6 kibbles ore from Fechtenbach's Nick in Brandlgil† at 6d. Lime for Smelthouses, Parseval and John Worn, 500 loads, £5; Thomas Wilmsen, 1000 loads, £10.

Charcoal.—Expenses of Rogier Engmander, Thurland's collier, and other colliers, half to be paid by our Calgarth account and half by our Isel account.—R. Engmander's journey to get 13

* He married Mabel Bulfell, 1568-9, and this account runs from Jan. 1.

† Brandelgil must be one of the watercourses down Catbells into Brandelhow wood. This is the only notice we have in these Accounts of mining at Brandelhow, afterwards an important site.

The first of these is the fact that the United States is a young nation, and that its history is a history of growth and development. It is a history of a people who have been able to adapt themselves to a new and changing environment, and who have been able to create a new and better life for themselves.

The second of these is the fact that the United States is a nation of immigrants. It is a nation of people who have come from many different parts of the world, and who have brought with them their own customs, languages, and ways of life. This has made the United States a rich and diverse nation, and it has been one of the reasons for its success.

The third of these is the fact that the United States is a nation of freedom. It is a nation where people are free to express their opinions, to follow their own paths, and to live their own lives. This has been one of the great strengths of the United States, and it has been one of the reasons for its popularity around the world.

The fourth of these is the fact that the United States is a nation of progress. It is a nation that has always been looking for new ways to improve itself, and that has always been willing to try new things. This has been one of the great strengths of the United States, and it has been one of the reasons for its success.

The fifth of these is the fact that the United States is a nation of peace. It is a nation that has always been looking for ways to resolve its conflicts, and that has always been willing to negotiate. This has been one of the great strengths of the United States, and it has been one of the reasons for its success.

The sixth of these is the fact that the United States is a nation of justice. It is a nation that has always been looking for ways to make things fair, and that has always been willing to stand up for what is right. This has been one of the great strengths of the United States, and it has been one of the reasons for its success.

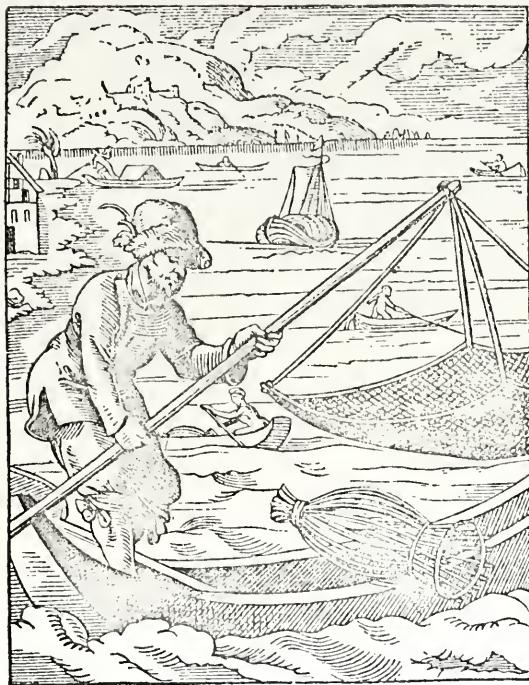
The seventh of these is the fact that the United States is a nation of hope. It is a nation that has always been looking for a better future, and that has always been willing to work for it. This has been one of the great strengths of the United States, and it has been one of the reasons for its success.

colliers from Schropschier: Feb. 8 to 17, with horse, 16/8; expenses of a clerk, Feb. 18 to March 8, to read the Commission for me* 8/- and given him for his trouble 4/-. Own expenses with horse Feb. 18 to March 1, £1 4 0. Sunday, Feb. 20, R. Engmänder engaged Richardt Arras and Petter Samson, colliers, from the Earl of Leicester's work, and gave them 1/4; their keep, Feb. 20 to March 1, 13/4; to the bailiff and 2 constables, watching the colliers that they should not run away, one night 2/-. Tuesday, Feb. 22, R. E. engaged Niclaus Browen at Maydlin (Madeley) 16 miles from Clibari (Cleobury Mortimer) and gave him 8d.; keep, 8 days, 6/8. Feb. 23, he engaged John Graisla and John Gottier and gave them 1/4; their keep 7 days, 11/8, and constable 4 days, 4/-. R. E. engaged Richardt Stockton in Duly (Dudley), 8d., and keep 7 days, 5/10. Thursday, Feb. 24, he engaged at Kanckhwod (Cannock Chase) Willm Lepwod (or Hepwod) and John Farc, and gave them 1/4; keep, 10/-, and constable, 1 day and night, 1/4. Feb. 25 he engaged Humfrey Bolssworth, Thomas Gossling and Georg Hassel and gave 2/-; keep 12/6, constable 8d. To one who guided Rogier in the wood (Cannock) 8d. Feb. 26, shoeing horse, 1/3. Tuesday, March 1, Rogier engaged Petter Korn and John Roddes, and gave 1/4; keep 1/8. Expenses last night with the colliers 3/-. R. Engmänder with a horse and 13 colliers to Keswick, 6 days' journey, £3 6 0.—£10 1 11.

Peat supplied to workmen, 689 loads, £5 4 10; chips, 158 loads, £1 6 4. To avoid dispute, Höchstetter agrees that peat and wood for the last four terms shall be reckoned to the men as they request at 2d. a load, not at 3½d. its cost price to us.

Daniel Ulstät before returning to Germany incurred the following expenses:—1 silver saltcellar, £2 10 0; drink to Herr Debitis (Lord Deputy's) servant bringing game, 2/-; Lord Mountjoy's players, 2/-; charity to prisoners, 2/-; given to Ernwallner and Ch. Müller on being fined, 5/- each; paying calls on Duckhet [at Grayrigg], Patrison [at Frizington?], Flemming [W. Fleming at Rydal], Loder [Sir Richard Lowther], Ly [Thomas Leigh or Lee of Isel] and others, £4; pears and plums, 2/-; charity at Keswick, £2; Mr. Loder's huntsman, for a goat,

* I understand that Engmänder, being a foreigner, needed the clerk to read out to the workmen the terms of the engagement proposed. These terms must have been curious, for colliers (according to Sir Walter Scott's note to *Redgauntlet*) were "bondsmen." In this case they were being transferred from the Earl of Leicester's service, in the Midlands, to that of the Company in which he was interested in the North; and it is obvious from this paragraph and from later events that they were unwilling.



FRESH-WATER FISHING ;
after Jost Amman, 1539-1591.

(See p. 64).



THE GARDEN OF THE
GODS

4/-; Milord Cummerland's servant, *do.*, 3/-; Israel Waltz for (medical) draught, clysters, powder, etc., 9/-; to a farmer who found a new mine, 1/-; Miladi's maid who brought a swan, 1/-; Hans Moser who brought fish every Friday, 5/-; Silbereysen who brought salmon-trout, 2/-; for 2 swans that Kalcher shot, 10/-; to Thurland's servants at New Year, 10/-; players at Christmas, 3/-; Duckhet's man who brought cheese and oranges, 1/-; to the workmen for singing on Three Kings' Day, 5/-; colliers at Borrowdale to drink, 1/-; Musgrave's parker, who gave him 12 black rabbits, 4/-; various dinners with others at Newlands, £1 10 0.—£11 8 4.

D. Ulstät also paid Conrad Haintzelman's horse-hire for a year, £5 12 6; Miladi for a lamb, 2/-; oysters and 6 partridges, 4/-; wages of kitchen-maid, as long as she was with us, 16/-; lent Michel Harpfer 10/-; a potter for pots and muffles [for smelting], 6/-; a coat for his boy, £1 10 0; various workmen helping him to make pots, £4.

Michel Härpfer, for serving D. Ulstät 3 years, £18 1 3½.

W. Prugger, contract for work at Newlands smithy, £8.

George Lamplugh lent us £20. U. Frass paid John Vischer (Fisher) of Cockermouth money owed him by workmen, £3 10 0. John Tarston bought a piece of fustian, 8/8. Ulrich paid Robert Sara (? Sawrey) an old debt of Needham's, 5/-. Conrad Heintzelman owed on drapery, but Ulstät remitted the debt, £2 14 5. The "barber," Hans Franckh, when a smelter was ill in London, £1 9 8.

Charcoal at Isel Park.—Meils Dencson, for making a path through his land, 6/8; Joris Dockhtel (? George Stockdale) for wheels, £1 8 0; John Vischer for 15 colliers 3 days, £1 7 0.

Peat.—English workmen to help the Dutch peat cutters? (Bej den Nederlandischen Petzstechern), 9/8.

Rochius Franckh before leaving Keswick left various articles for sale to the men or otherwise:—First, a fine new Dr. Marthin Luther's Bible, printed in Franckhfurt, with the beautiful figures, cost 6 florins. *Summarium uber die Bibel*, 1 fl. 30. *Die Gross Kirchen Postill Lutheri, sambt auslegung d. Episteln und Evangelien*,* cost in Vienna 3 fl. 30. Three books of church history, made and printed in Jhena (Jena), cost 5 fl. Forty-five of the

* Luther; *Postill, Auslegung der Episteln und Evangelien durch den Advent*, 4to, 1521; also *Auslegung der Evangelien und Episteln*, Wittenberg, 1526, are in the Bodleian. I am indebted to my son for this and the following notes from the Bodleian.

books of Paulus Jovius,* cost 5 fl. 30. *Cosmographia Seb. Munsteri*, 4 fl. *Perspectiva Vitruvii*, 3 fl. *Regenten Bucch*, 2 fl. *Cronica der Teutschen*, Seb. Franckh, 1 fl. 30. *Weltbuch*, Seb. Franckh, 1 fl. 30. *Instrument Buch Petri Apiani*, 1 fl. 30, and other handbooks not valued; also 6 pair shoes, making in all £7 0 7.

Also new hose, soiled, 7/6; 26 black hooks for a dressing-gown, cost in London £1; 1 good dressing-gown, "color de Roy," cost in London £3 17 3, valued at £3 6 0; 1 good black riding coat with fringe, £2; 1 buckskin hood, cost in Antwerp 2/2 [see p. 27]; 1 white linen jacket with black border, and lined with cotton, 11/3; 1 jerkin (Leibröckhlin) of Turkish "Macheyar," trimmed with a border, 10/-; 1 single linen jacket, 2/-; 1 pair black woollen hose, 8/-; 1 good pair hose [*i.e.*, tight breeches] with leather seat and woollen stockings, 15/-; 1 black jerkin lined with fox-skin, £1 2 6; 1 cypress chest with tinned lock and key, 15/-. The above at his own valuation.

Copper made, by Marx Steinberger's account, 57 cwt. Sent to Anthony Parker, Mr. Wm. Pellam's servant, in her Majesty's name May 18, 24 cwt. and 16 cwt., June 1, 20 cwt., June 2, 60 cwt., and June 6, 70 cwt., for which at £3 Queen Elizabeth owes £570.

Ore raised this term: massy ore 1489 kibbles = 2233½ cwt.; shaly ore 1295½ kibbles = 1735 cwt.; Colbenbruch 1557 kibbles = 2103½ cwt. Smelted massy ore 1827 cwt.; shaly ore 908½ cwt.

* Paulus Jovius of Como, Bishop of Nocera, voluminous writer on travel, modern history, geography, and biography; earliest works, *de Muscor. legatione* and *Novus orbis*, about 1537; opera omnia in 2 folios, Basil, 1578. His chief work seems to have been *Liber de Imperiis et Gentibus Cogniti Orbis*, Ven., 1548, from which an extract is in the Bodleian named *Descriptio Britanniae, Scotiae, Hiberniae et Orchadum*.

From the well-known *Cosmography* of Munster, 1552, I give two illustrations of especial interest in this connection at pages 33 and 45, for our miners must have seen themselves thus portrayed in the book they possessed.

Perspectiva Vitruvii in this form does not occur in the Bodleian Catalogue: several editions of *Vitruvius de Architectura* were current at the time. *Regenten Bucch*; no information obtainable at the Bodleian, nor about the Jena *Kirchen Historien*.

Sebastian Franckh of Donauwörth, pseudonym "Augustinus Eleutherius," published *Chronica*, etc., Strassburg, 1531; first part of the *Weltbuch*, describing the countries of the world, and second part, Frankfurt am Main, durch Ulr. Schmidt, 1567; etc.

Petrus Apianus wrote *Cosmographies*, also *Quadrans astronomicus et jam recens inventus et nunc primum editus*, Ingolstatii 1532; *Instrumentum primi mobilis*; *accedit Gebri filii Ajlla libri ix de Astronomia, Arabice scripti et per Giriardum Crenonensem latinitate donati*, Norimb., 1534; *Instrumentum sinuum seu primi mobilis*; *adjectus est quadrans universalis seu generalis*, Norimb., 1541.

Mr. Thomas Ly [Leigh of Isel] for Isel park wood, £200. Edward Dacre* has received in London from G. Hofman on a bill of exchange £125. Leonello Duckhet, alderman, sent us by John Grave cash £100.

1569, ST. JAMES' DAY RECKONING (RECHNUNNG JACOBY).

June 6, Ulrich Frass, account for men's keep, £400 12 0½; Hans Reinbrun, expended for peat, ore, charcoal and lime, £650 18 11½; Gregory Weiss received on account of board, £2 11 7½. Miners, sorters and smelters are in debt to the Company, £148 5 7. Two gold rings [see p. 20], £3 18 8.

Mr. Benet, vicar here, owes £2; William Patrison, £13 6 8; Edmund Radclieff, £2; John Grave, messenger, £1; Robyn Fletscher, messenger, £1; Caspar Klockher and 2 others have received £7 too much in last term's payment; this must be deducted. In Hans Reinbrun's absence in London, U. Frass and L. Stamler have paid out to carriers of peat, etc., £214 12 9.

Smelting.—Wm. Athaw measuring peat, lime, etc., and clearing stones, stacking peat and lime, cleaving wood. J. Fisher at Brandelhow lopping and topping 60 birches for firewood, etc., £3 16 6.

Building.—Paving a floor in the furnace, 8/-. 17 days with horses at 7d. getting sand from Keswick bridge; John Pundtin (Bunting) of Castrich (Castrigg) 2 fother wood from Jaemes Radclieff's ground, 1/8. Parseval Pundtin for a grindstone, 1/4.—£1 0 11.

June 13. *Smelting.*—W. Stupp, firewood; H. Schipper 6 days at 6d.; meal to make paste to mend smelting bellows, 8d., etc.—£5 3 0.

Building.—Paving floor to furnace, 16/6; roofing lime sheds with sods, 9/-.

House.—Mr. D. Ulstet bought from Meils Faschet, carpenter, a chest for clothes, 15/-, and table, 6/8.

Carriage.—Jaemes Stable brought from London 5 casks of assay crucibles, 326 lb., £1 7 2.

Calgarth.—Mr. Roulandt Philippson's servants for 80 stone kelp† (Aschen) for coaling, and sent him by Niclaus Dee, foreman collier, cash on the 16th, £11.

* Perhaps the son of William, lord Dacre; his brother Francis, who married Dorothy Radcliffe, is mentioned in these MSS.

† "Aschen" has been translated "Kelp" for want of a better word. This was used in smelting; later we find it used in washing clothes, as ashes of the ash-tree were, until modern times, in this district, for the sake of the alkali in them. In this passage, however (80 Stein Aschen zum Kolen), it looks as though the kelp were meant for—and not the product of—charcoal burning.

June 20. *Smelting*.—[As usual, namely] Robert Bank, crusher; Thomas Bawman, watchman; Wm. Athaw, 6 days; and 48 days' work at 6d. in smelting; at the furnace and carrying stones 24 days at 6d., and 24 days at 5d.; at the charcoal shed 12 days at 6d.; splitting wood, 6 days at 6d.; at the peat stacks 4 days at 6d. and 119 at 5d.; at the lime stacks, 5 days at 5d.; fetching sods with a horse to cover peat-stacks, 10 days at 7d. Wolff Hund, 1 bushel kelp, 1/-. John Bank, 24 piggins (Schin-fesser), 6/-, and 12 sieves for the crusher, 4/-. 1 great sieve for the stamp, 8d. Petter Bautbe (? Boltby) who puts peats in sacks and supplies all 8 furnaces, at 7/10 a week. Watchman's dog, keep from Easter, 6/8. John Bill and Hue Gaggall, 14 boat-loads firewood, Borrowdale to Millenstet, 7/-. Lienhart Schuet, 13 days at 8d., getting stone from Borrowdale, carriage 9/7½. Bringing firewood from the Vorwald (Swinside) by water, 3/6; splitting same, 1/0. Wood from Brandelhow by water, 1/9; cutting and splitting same 2/-. Carrying wood from waterside to Smelthouses, 2/11; extra help with same, 5d.—£10 18 4½.

In the Vorwald, Scot cut 216 oaks at 3d., and 12 in Lord Northumberland's wood, £2 14 0.

J. Dixon, carrying ore from Buttermere, bringing it up from waterside and putting it into sacks, £7 1 1.

Building.—J., T., R. and W. Scot making stair to charcoal shed, 16/8. T. Scot, 4 days at 10d., making a sieve shed (Rädel barn), 3/4. Paving floor to furnace, 10 days at 6d. Roofing lime shed 6 days at 6d. John Bank for a dry wall in front of smithy, 9d. 20 sacks "Gemüess" (? moss) for plugging the dry wall and weir, 1/4. Riddling sand, 6/3½. Bringing sand from bridge, 3/6; J. Dixon helping, 1/6.—£2 1 4½.

June 22. Symon Mosgraff pays £50.

June 24. Duke of Norfolk on bill of exchange £100. D. Ustat sends from London by Robin Fletcher in gold £300.

Henry Fletcher has deposited and drawn at London £80 14 0. From him we have bought 1¾ tun red and white wine, £17.

George Lamplugh has received on bill of exchange £60.

U. Frass has paid the men on behalf of R. Franckh for scrap iron £5 19 7½; to J. Wyser £1 16 7; M. Krümpacher £2 13 1; Hans Plum, 1 week's wages at smelting 4/-. B. Effendler and party, 14/-.

June 27. Wm. Patrison has paid us £13 6 8.

H. Reinbrun received for ore, peat, etc., £50, and £171 16 8.

George Lamplugh paid on bill of exchange £40 [this inserted by Loner in London].

The first of these is the fact that the
 university is a body of men and women
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Smelting.—As usual, with cleaning kelp 5 shifts at 6d.—£6 1 4½.

Building.—John Fisher heightening the chimney to carry the smoke more completely out of the Smelthouse; with Adam Fisher and Robert Mor at 12d. a day, and Meils Fisher and Steffan Buser at 9d. U. Frass has understated 3 accounts for work done by 1/8, 8d. and 1/2.—£2 15 4.

Wine.—Carriage of 1 tun from Cockermouth 10/- and ¾ tun from Workington 10/-.

Jun. 30. Repaid John Wilnson £33. H. Reinbrun recd. £40 and £20.

Bought a cart horse from Rob Gotz £4 16 8.

Smelting.—P. Bautbe peat stacking. Lienhart Schuet for 8 stones for the smelting furnace zu den fürwänden; Thomas Hary and party bringing 300 big stones for *ditto* by water 8/-; Chris. Worn, 3 boatloads *ditto* 2/-; Hans Plum cutting wood in Vorwald 2/-; John Fisher of Thornton (? Thorntwaite) 5 loads horsebones for the assay,* 3/4.—£8 14 9½.

Building.—Still heightening the chimney: 2 women at 5d. riddling sand, etc.—£2 5 1.

House.—A coverlet or bedspread 2/4; bath tub which Mr. Ulstat ordered, 5/6. 17½ yds. woollen cloth at 12d.

Rent.—John Bulfeldt, 2 rooms and a cellar, 1 year to May 1, £3. Bailey P. Radclieff, 3 houses, 1 year to July 3, namely the house in which we live, 10/-, a stable, 15/-, a hay house, £1 6 8.

Duke of Norfolk, £60.

July 11. *Smelting.*—Edi Radclieff 6 days at 6d. helping to get stone, etc., £4 17 4.

Building.—T. Scot; J. Fisher heightening vault over copper furnace and raising the "Kümich"; Christoffer Maison and party getting stones from ground below Smelthouses and building wall, £24 5 9.

3 Fother lead ore from Anthony Dasson and Hue Watzen of Allenthal (Allendale) with carriage, £12.

Carriage.—Wm. Stable brought from London 4 cwt. 37¼ lb. steel, 2 sugarloaves, 23¼ lb., 1 steelyard, 29 lb.—£2 5 1.

Jy. 19. Duke of Norfolk £90. H. Reinbrun for peat, etc., £113.

July 22. *Smelting.*—£5 15 0. *Building.*—11/2.

Smithy.—8000 lath nails £1 5 4.

* "Rossbainer zu den Capellen zum probiren," for the assay-cupels, or laboratory? If so, the translation of "Kapelle" by "chapel" on page 32 was perhaps an error, and the reference to that passage on page 24 ought to be struck out. "Zu den fürwänden"—does this mean "for the flues?"

Bought in Keswick, 33½ ells cloth £1 13 6; 8½ yds. sackcloth, 4/3; 14 lb. tallow, 3/-.

Rents.—Gilbert Gwarton, hayloft, 1 year to Oct. 10, 13/4. John Bonner, Newlands, for a stable where our horses rest at midday, this summer till Maria Magdalena (July 22), 2/4.

Drapery.—Sold to the men, cloth, black carisea, fustian, macheyar, velvet, taffeta, half-silk ticken, coarse woollen cloth, frieze, cordovan leather, linen, canvas, £17 9 11. Bought two covers for feather beds, £1 10 6.

Wine.—Bought by men £52 4 2.

Smithy.—Tools supplied to men £2 7 1; and to Building account £7 12 0.

Wages of M. Kiendler £6 and H. Reütter £4.

Horses.—Shoeing, 8/-; cartwright, 2/-; repairs to cart, £4 12 7.

Travelling.—Board and beer, £27 13 8½; journeys, and wages of messengers, £4 17 11.

Men's families.—Deufferer's children, £1 10 0; Colmanstetter's wife, 12/-; Hellensteiner's father, 7/6; Ernwaller's mother, 7/6; W. Prugger's wife, £1 10 0; Reindel's wife, 12/-; Reichel's wife, 12/-. R. Franck finds that Colmanstetter's wife has been getting only 24 kreutzers a week instead of the 36 deducted from his wages: this to be set right by paying her £1.

R. Franck appears to have given B. Effendler a credit note for £7 7 9 but afterwards stated the claim as £5 16 1; I cannot understand why [says Ulrich Frass] and nobody can find an entry in Franck's accounts explaining it. I therefore credit Effendler with the balance, £1 11 8.

R. Franck paid R. Wurzer twice over £1.

Two English smiths who brought a note from R. Franck that they were entitled to pay for overtime, 5/4.

Robert Bendloss received in London on behalf of Hugo Sewel, parson in Caldbeck, for wood £7 7 9.

July 25. *Smelting.*—£5 3 7.

Newlands Stamp.—Clearing watercourse, etc.; P. Pundtin and Richard Nixon, carters; Silbereysen for our carter, Hans Wal-sitter, 46 dinners at 6d.; horses' food at Newlands 2/10; Steffan Murr, washer, 8 weeks, £2 8 0, etc.—£11 9 4½.

Grasmere Stamp.—W. Hochholzer £15; walling the "Bruchhof," sweeping out the Nick and setting up the "Pruch" for the stamps upon it £2 10 0. Christian Bodner, foreman washer, £3 4 0. Watchman day and night during Whitsuntide holidays 4/2. Willm Watzon wife for taking planks to her house and

bringing them away 2/-. Repairing the roof 4/-. Repairs to house in which the men live 1/8. Bought from Mr. Willm Flemming 9 oaks £1 16 0, and 18 "sipling," £1 16 0. Kibble for grease and 9 water kibbles 1/3. Hans Plum, assistant washer, 8/-. C. Bodner 6/3. 1 piece ox leather 3/-.—£33 14 9. Iron and steel from smithy for the 8 "Schiesser" and the 2 "Schabatten," £32 11 2.

NEWLANDS.—*Wages*; H. Häring, foreman, H. Mair, H. Grüm-pühler, W. Binder, M. Scheucher, Reichart Mitterholtzer and M. Berger, £5 12 0.

Contracts.—C. Klocker, R. Wurzer and C. Böckh, opening up 1 fathom at *Fürdernus* adit, etc., £20 15 0.

Tributing.—J. Kössler and B. Effendler at *God's Gift*, £1 8 3; the same with F. Wallner, £37 3 8.

M. Berger, H. Matzler, L. Prugger, B. Moser, A. Reindel, J. Schwaiger and F. Wallner at *God's Gift*, omitted last term, £16 7 7; this term, making a cutting between *God's Gift* and *Fürdernus* adit, etc., £55 13 4.

H. Paintner, H. Opperer, H. Moser, H. Mair, H. Underwöger, N. Schram and S. Nuspaumer, at *God's Gift*, £27 12 5, all of which had been paid in advance.

H. Paintner, H. Moser, H. Opperer, H. Hammel, H. Underwöger, N. Schram, J. Colmanstetter and P. Linsperger at *God's Gift*, £32 8 8.

J. Silbereysen, Gilg Högler,* H. Dierickh, T. Eysel, S. Kalcher, J. Heysel, E. Weyttgassner and M. Carius, £36.

J. Silbereysen, T. Eysel and J. Hofer at the *Bagpipes Nick*, 16/-.

S. Kalcher at *Bagpipes*, £2 12 9.

H. Dierickh and J. Colmanstetter at *Bagpipes*, £1 11 1.

P. Linsperger and H. Hammel at *Bagpipes*, £4 12 8.

J. Hofer, H. Mair and Philipp Mair, at *Bagpipes Nick*, £9.

T. Schöpf at *Bagpipes*, £2 18 7.

T. Schöpf, U. Schlegel and S. Buchberger at *Bagpipes*, £30.

W. Binder and R. Mitterholtzer at *Hamblin*, £2 11 8.

J. Reichel and H. Richter at *St. Peter*, £1 5 5.

H. Richter at *St. Peter*, £2 0 4.

J. von Syber at *St. Lienhart*, £2 6 0.

M. Scheucher and R. Mitterholtzer have made the cross cutting at *St. Joseph*, £4 10 0.

* As "George Hedgler," with Magdalene his wife, baptized at Crosthwaite Effire 1570 and Annamaria 1572.

Sorters.—A. Torer, C. Fanginger and H. Grümpühler at *God's Gift* have sorted 1167 kibbles massy ore, 796 k. shaly ore and 1185 k. Colbenbruch,—£37 10 10. J. Hutson and J. Hagrig at *Bagpipes* 286 k. massy ore, 258 k. shaly ore, 1104 k. Colbenbruch, £11 10 6. The 2 John Dambsons have sorted at the *Hamblin, St. Peter and St. Lienhart*, £1 12 0.

English labour.—Carriage of 223 loads of billets from the Vorwald to Newlands £1 17 2; and at 6d. and 5d. were employed 29 men in the first week of this term, 30 in the 2nd, 31 in the 3rd, 28 in the 4th, 27 in the 5th, 25 in the 6th, 25 in the 7th, and 26 in the eighth. W. Athaw has been caretaking in the Vorwald to see that the ore dumped there is not trodden into the ground. Hue Lancaster and Hue Ladstockh clearing out the Nick at *St. Joseph* and building a dry wall. W. Gasgall, carriage of iron tools. Mending 3 Markenschlossen (? mine locks) 8d. John Lambert, cooper, 4 windlass-kibbles.—Total at Newlands, £379 5 8.

Tallow used at Newlands, £1 11 8.

Smithy.—859 lb. iron at 2½d.; 362 lb. tallow at 4d.

Martin Berger and his partners, and H. Paintdner and his partners were overpaid last time for ore then unsorted, £6.

P. Kolseysen and W. Hund had 24 loads of charcoal at 2/6 for use in smithy; their work for men on wages at Newlands amounts to £4 15 2½, and they used 100½ lb. steel at 4½d.

CALDBECK.—Hewers and English labourers; B. Fechtenbach 7 weeks at 9/-, H. Hellensteiner, 5 weeks 3 days at 5/6; 62 days English labour at 5d. House rent to John Lemhart (? Lambert) for a room where tools, etc., are kept, 1 year to June 5, 7/-. Symon Scot for lodging the men to Martinmas 3/- and for peat 2/4.—Total at Caldbeck, £6 11 8.

Tallow, 23 lb. 7/8, and smithy 3/7, for Caldbeck.—11/3.

Smithy.—Wages: H. Setzenstollen at 10/-; A. Ringseysen at 8/-; Dix Watterson at 4/-; Parseval Hue at 4/-, John Hutson at 4/-.—£12 0 4.

Smelters' wages.—T. Wallner, foreman in Jobst Stoltz's place, £5 for oversight and 13/6 a week; U. Stampfer at 9/-; J. Staudacher at 9/-; M. Obersteiner at 10/-; B. Purenberger at 9/-; R. Schrottenberger at 8/-; B. Böllinger at 8/-; J. Deufferer at 9/-; S. Zayssacher at 8/-; H. Altschmer at 8/-; B. Fechtenbach at 9/-; E. Greutter at 4/-; H. Plum at 4/-.—£45 8 1.

H. Regauer, carpenter, wages at 9/-.—£3 12 0.

Newland Stamp.—W. Prugger's plank-cutters, Ap. 2 to July 30 at 10d., and cutting a rod of boards, £54 5 4.

The first of these is the fact that the United States is a young nation, and that its history is a history of growth and expansion. The second is the fact that the United States is a nation of immigrants, and that its history is a history of the struggle for a better life. The third is the fact that the United States is a nation of free men, and that its history is a history of the struggle for freedom.

THE HISTORY OF THE UNITED STATES

The history of the United States is a story of a young nation that has grown from a small colony to a great power. It is a story of a people who have fought for freedom and justice, and who have built a nation that is the envy of the world. The history of the United States is a story of a people who have been blessed with a great land, and who have made the most of it. It is a story of a people who have been blessed with a great government, and who have made the most of it. The history of the United States is a story of a people who have been blessed with a great future, and who have made the most of it.

Hans Walsitter, carter, wages at 3/-.—£1 4 0.

H. Reinbrun for peat, coal, ore, and lime carriers, £24.

Ore raised ; massy ore 1520 kibbles ; shaly ore 1069 kibbles ; Colbenbruch 2453 kibbles. *Smelted* : massy ore 2472 cwt. 56 lb., shaly ore 965 cwt. Nett expenses of term £662 19 3 $\frac{1}{2}$.

1569. HOLY CROSS DAY RECKONING (RECHNUNNG CRUCIS).

(Received in Augsburg, Oct. 29, 1569.)

August 1. Cash from Wm. Burd by Robin Fletcher, £100.

Smelting.—R. Bank, T. Bawman, W. Athaw, P. Bautbe, 10 English labourers ; work in charcoal shed, at furnace, and quarry ; W. Stopp carrying wood and stone from Brandellhow and Borrowdale by boat ; Richard Fisher of Brandellhow for wood.—£5 4 3.

Peat.—Christoffer Mayson, £3 5 10 ; Cuthbert Jaxson, 5/10.

Newlands Stamp.—English carpenters and sawyers, £12 os. 10d.

Building.—John Fisher, furnaces at Smelthouses ; Wm. Fisher, cutting planks for stamp, troughs and cart ; Robert Girby, slater ; lime from Brigham ; planks from Borrowdale boated by Stopp, £4 8 6.

House.—18 ells linen at 6d. for 3 dozen table napkins (tisch faceleten) ; 7 ells coarse canvas at 4d., for a hanging meat safe ; carriage of furniture by James Stamp, 7/10.

H. Reinbrun, to pay peat carriers, etc., £42.

August 10.—Henry Fletscher on bill of exchange on London, £173 3 4 ; paid him for the 1 $\frac{3}{4}$ tun wine bought June 24, £17 10 ; for rent of a meadow, due to Miladi Radclieff, £6 ; on his going to London, to be repaid by Joris Lample (Lamplugh), £20.

Rent.—P. Radclieff and J. Bulfeld for the house which Thurland and Ulstät took for 6 years at £10, £20.

Randal Ward [Kendal] paid us a debt, £20.

Smelting.—As usual, £4 15 9. *Peat*—£1 9 2

Newlands Stamp—Roughcasting the wall on the weather side and the one against which the wheel-axle rests, 10/2.

Earl of Northumberland for 14 great oaks, £15 11 10 $\frac{1}{2}$.

Building.—Loft to assay-house, etc., £1 3 4.

August 15.—Mattheus Scheuher, miner, at the end of Christmas term, intending to go to Germany, had a credit note on Augsburg from D. Ulstät for £25 ; but he is not going on account of the war,* and has returned to Keswick : his deposit is therefore put to his account here—£25.

* The Duke of Alva came to Flanders 1568-69 ; but the presence of his army did not prevent others from travelling during this period.

Rochius Franck, on the death of Agnes Bilauffin, widow, took possession of £2 19 0 which she left; and we cannot find that he accounted for this in full. We therefore transfer from general expenses to his account £1 8 10.

Smelting.—As usual, £5 5 2. *Peat*.—From C. Mayson, £1 13 4.

Lead ore from Anthony Dasson and Hue Watzon, £13 5 0.

Carriage.—W. Stable from London, 8 casks nails, 8 pieces sackcloth, 6 copy books, tin to solder a lead pipe, 66 lb., £4 9 6.

Newlands Stamp.—English labour, 42 shifts, £1 14 0.

W. Pürdt (Burd), treasurer, paid to Rupert Chamber on our bill of exchange in London, £106 13 4; and sent us by J. Grave £100.

John Sudayckh (Southaik) received from G. Hofman on a bill of D. Ulstät's, before he left Keswick, £24.

August 18. *Carriage of Ore*.—Robert Stanger and John Rigges from Newlands, £4 12 6. *Smelting*.—£6 10 0.

Stonecoal.—Raff Kar (Ralph Carr), of Newcastell, prospecting for stonecoal "im blinden Krackh" (at Blencrake); he has sunk 12 fathom in 2 shafts, £7 8 0. On June 11 we bought 17 loads at 4d. for smithy, 5/8.

Charcoal from Fournes (Furness),* Bernhart Penson (Bernard Benson), Lorentz Brathwayt, Mylles Rigges, John Grygge, all at 2/4 the load for carriage, £10 10 7.

Peat.—Richardt Scot for a way through his ground from Schidau (Skiddaw) for one year, 8/-; making that way, £1 6 8. Thomas Mayson carrying 4 [long] hundred loads peat from Schidau at 2½d., £5 10 0. Marmaduckh Walekher and Robert Grave, 4 hund. and 2 *ditto*. Christoffer Lancaster 3 hund. from Flasco at 4d. Richardt Hudgson 2½ hund. and 3 *ditto*. Thomas Cannon 1 hund. *ditto*. John Scot, of Trylekhet (Threlkeld), 60 loads *ditto*. John Hudgson 1 hund. and 106 from Gresdall (Mungrisdale) at 4d. John Grysdall 3 hund. from Flasco. John Dalston, rent for right of way from Flasco, 6/8. Willm Suttén 5 hund. and 22 from Flasco. John Gaytskell, of Trylekhet, 1 hund. from Schidau. John Scot, of Trylekhet, 1 hund. *ditto*. Gawen Radclieff 1 hund. *ditto*. John Bawrnes 60 loads from Flasco. Christoffer Rytson 5 hund. *ditto*. Christoffer Worn and Christoffer Mayson 15 hund. *ditto*. Edward Hodgson and John Readhead 10 hund. and 31 *ditto*. Niclaus Hodgson 5 hund. from Schidau.

* Mr. W. Fleming having now begun to produce charcoal, Furness farmers carry it to Keswick. For Bernard Benson of the Fould, Loughrigg, living between 1563 and 1575, see Miss Armit's article in C. & W. *Transactions*, N.S., viii., p. 174. For Greig of Grigg-field, Loughrigg, *ibid.*, p. 189.

Thomas Banck 5 hund. and 12 from Flasco, and 1 hund. from Schidau. Richardt Grave 3 hundred from High Seatt at 4d. John Gaytskell, of Grisdall, $1\frac{1}{2}$ hundred and 10 from Flasco. Christoffer Moss 1 hundred *ditto*.—£142 10 7 $\frac{1}{2}$.

Martin Andere for leading 39 kibbles ore from Kolbeck, 16/2.

August 22. *Smelting*.—£4 19 11. *Newlands Stamp*.—£1 9 2.

August 26. *Smelting*.—£3 11 4. Peat stacked at Smelthouses by Christ. Mayson, £1 10 0.

Newlands Stamp.—James Penson, slater, for roofing the stamp-house, etc., £6 18 10.

G. Hoffman sent us by Robin Fletscher, in gold, £200.

Queen Elizabeth has paid balance on 1000 cwt. copper, £1000.

John Chürckh has sent us from Westcester, instead of the salt we bought [see p. 34], 3500 big board nails at 12/- the thousand; 9000 double nails at 4/-; 2000 middle nails at 3/-; 8500 lath nails at 6/8, and 10,000 lath nails at 2/-, and 3 casks £8 3 8. Also 12 dozen wooden trenchers, 3/-, and 12 cheeses at 12d. Taking to the ship, 1/-; customs, 1/1.—£19 4 9.

Sept. 5.—Israel Waltz before leaving sold us 174 loads peat at 2d., each load reckoned at 120, £1 9 0. Also 9 lb. bacon dripping, with the pot, 3/8; 1 leaden brewing vat (Breuhut), 6/8; 15 large beer glasses, 6/8; 1 box and a bread basket, 1/8.

Smelting.—£4 17 4 $\frac{1}{2}$. *Newlands Stamp*.—Carpenters, £1 12 1.

18 cwt. lead ore from Thomas Archer, £3 12 0.

Bought in Keswick, 1 brass pot to warm glue therein, 3/-.

Randal Ward for a draught board (Bretspil) for Mr. Ulstât, 6/-.

Niclaus Dee, foreman collier, a jerkin as a present over and above his wages, according to a note he brought from London, 15/3.

Sept. 12. *Smelting*.—£6 13 4.

John Dixson bought in Carlin (Carlisle) 16 $\frac{1}{2}$ yds. sackcloth at 4 $\frac{1}{2}$ d., and spent in going there 1/4; also going to Cockermouth twice for sackcloth in vain, 1/-.—8/10.

Carriage of Ore.—16/3. Sand from Keswick bridge, 16/8 $\frac{1}{2}$.

Newlands Stamp.—Wm. Dasson, of Gascadall (Cascadale), carriage of slates, 10 rods, £5. W. Prugger, 6 weeks, £13 0 1 $\frac{1}{2}$.

Coarse cloth bought in Keswick,* £2 4 9 $\frac{1}{2}$.

Men's families in Germany. Deufferer's children, Höllensteiner's father, Ernwallner's mother, and wives of Colmanstetter, W. Prugger, Reindel, and Reichel, £4 17 1 $\frac{1}{2}$.

* Woollen cloth was already made in the Lake District, and it is worth noting that even Haug & Co.'s drapery business could not maintain a monopoly of sales to their own people.

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS

TO THE HONORABLE SENATE
OF THE UNIVERSITY OF CHICAGO
IN RESPONSE TO A RESOLUTION
PASSED AT ITS MEETING OF MAY 1, 1906

BY THE PRESIDENT OF THE UNIVERSITY
OF CHICAGO
AND THE FACULTY OF THE UNIVERSITY
OF CHICAGO
IN RESPONSE TO A RESOLUTION
PASSED AT ITS MEETING OF MAY 1, 1906

THE UNIVERSITY OF CHICAGO
CHICAGO, ILLINOIS
1906

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1906

M. Kiendler, wages £5 5 0; H. Reitter, wages £3 10 0; Hans Walsitter, wages £1 1 0.

Sept. 13. *Drapery* sold to men.—Cloth, "Carisea," fustian, "Macheyar," linen, coarse cloth, frieze, Cordovan leather, sackcloth, £23 5 2. *Peat* sold to men, £14 3 2.

Horses.—Shoeing, mending cart, oats, £7 5 5½.

Board and beer by Gregory Weiss' account, £20 10 5½.

Travelling and messenger to London, £25 6 1½.

Newlands Stamp.—Lime; English labour; waller; mending road; 2 timber carters; Silbereysen for 13 dinners to Walsitter at 6d.; carriage of 4 great augers to bore the wooden pipes, with other tools from Grasmere to Newland, 2/6; etc.—£13 16 0.

W. Athaw carrying ore to the Vorwald, 17/4; and sackcloth for carrying ore, 14/10½.

NEWLANDS.—*Wages*: H. Häring, foreman, J. von Syber, S. Nuspaumer, W. Binder, M. Ernwallner, M. Berger, C. Klockher, C. Böckh, and R. Wurtzer, £8 16 6.

Contracts.—C. Klockher, C. Böckh, and R. Wurtzer, 2 fathoms of their old job at *Fürdernus* adit, and 2 on the new job, and ore, £19 17 4.

Tributing.—J. Kössler, B. Effendler and F. Wallner at *God's Gift*, and ore, £24 17 1. The same with S. Nuspaumer, sinking a water pit for a stamp, £1.

M. Berger, H. Matzler, L. Prugger, B. Moser, A. Reindel and J. Schwaiger at *God's Gift*, and ore, £33 5 1.

H. Paindtner, H. Moser, H. Opperer, H. Hammel, H. Underwöger, N. Schram, J. Colmanstetter and P. Linsperger at *God's Gift*, £36 16 0.

J. Silbereysen, Gillig Högler, H. Dierickh, T. Eysel, S. Kalcher, J. Heysel, E. Weittgassner and M. Carius at *God's Gift*, £64 3 1, less charges, £28 3 1.

J. Hofer, H. Mair and P. Mair at *Franckenstein*, £20 17 0, less charges, £11 7 0.

T. Schöpf, U. Schlegel and S. Buchberger at *Franckenstein*, £17 5 8.

H. Richter at *St. Peter*, £4 18 2.

J. von Syber at *St. Leonhart*, 3/6.

M. Scheuher and R. Mitterholzer at *St. Joseph*, £8.

Sorters.—A. Torer, C. Fanginger and H. Grümpüchler at *God's Gift*, 788 kibbles massy ore, 470 kibbles shaly ore, and 1265 kibbles Colbenbruch, £26 16 2; their sorters, £12 13 6.

John Hagrig and John Hutson at *Bagpipes* and *Franckenstein*, £4 18 2.

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John Dambson at *St. Lienhart* and *St. Peter*, 19/8.

English labour at 6d. and 5d. a shift, £23 12 6½.

John Wilnson, shopkeeper, writing materials for the foreman, 6d.; 2 quires paper, 8d.; coarse thread to sew ore-sacks, 1/-.

Smithy for Newlands and tallow, £2 5 2½; iron and tallow supplied to tributers, £10 15 2. P. Kolseysen and W. Hund, 18 loads of charcoal, £2 5 0; rent of smithy, £3 12 2, and cost of steel, 102 lb. at 4d., £1 18 3, must be deducted from their pay, £14 13 5. In the smithy at Smelthouses 104 sacks charcoal were used, £6 1 4.

CALDBECK.—*Wages*: W. Binder, £1 7 3; R. Wurzer, 5/6; H. Hellensteiner, 2/9. *Tributing*.—J. Reichel and H. Hellensteiner, £5 9 0. *Sorters*.—Edi Alleson and Edi Jaxson at the *Rider* (see p. 12) 54½ kibbles massy ore, £1 0 3. English labour at 6d., £2 13 0; at 8d., for cutting wood for the stamp and taking it to the pits, 4/8; walling, 6/-; carriage of tools from smithy, 2/9; 3 ells canvas, 1/-; 3 yards sackcloth, 1/9; 2 water buckets, 10d.; 1 brandreth (Dryfuess), 1/-; 1 kettle, 1/4; 1 pan, 1/4; 1 spit, 10d.; 1 kibble to salt meat in, 1/-; trenchers and platters, 1/10.—£3 17 4. *Smithy* and tallow for the mine, £3 0 1; for the men, £1 3 2.

Grasmere.—S. Murr, foreman washer, £2 16 0; M. Ernwallner, £1 18 6; W. Hochholtzer,* £1 2 6, also making a bedroom and kitchen, £4. At the ore-stamps, English labour, £2 13 4; carpenters, £1 17 6; carriage of wood, 12/-. Jaemes Penson, roofing little house at the stamps, 9/4. Hay bought from the "Pogart," 1/-. An English smith to cut off the Seneysen [with "Seneysen" compare "Senstock," page 53] 4d. Sackcloth, £2 1 1½; J. Wilnson for thread, 6d.—£17 12 1½.

Scrap iron returned by men, £1 13 7.

Smithy.—*Wages*: H. Setzenstollen, £3 19 2; A. Ringseysen, £3 2 0; Dix Watterson, £1 13 8; Parseval Hue, £1 8 0.

Smelters' wages.—T. Wallner, foreman, £4 14 6; U. Stampfer, £3 13 6; J. Staudacher, £4 7 0; B. Pürnberger, £3 4 6; R. Schrottenberger, £2 17 4; B. Böllinger, £2 16 8; J. Deufferer, £3 19 6; S. Zaissacher, £2 16 0; H. Altschmer, £2 16 0; B. Fechtenbach, £3 13 6; H. Schipper, 13/4.

Smithy for Smelthouses, £3 15 0; and for men there, 13/5.

Carpenter at Smelthouses, H. Regauer, £3 4 6.

Wine sold to men, £33 19 6½; beer, £3 5 9.

* The carpenter, whose long-continued work at Grasmere suggests that much of the building there consisted of wooden huts. This helps to explain the disappearance of the Germans' work at Greenhead Gill.

The first of these is the fact that the
 of the world is not a uniform one, but
 is a complex of many different parts,
 each of which has its own characteristics
 and its own history. The second is the fact
 that the world is not a static one, but
 is a dynamic one, in which things are
 constantly changing and evolving.

The third is the fact that the world
 is not a simple one, but is a complex
 one, in which many different things
 are going on at the same time. The fourth
 is the fact that the world is not a
 uniform one, but is a complex of many
 different parts, each of which has its
 own characteristics and its own history.

The fifth is the fact that the world
 is not a static one, but is a dynamic
 one, in which things are constantly
 changing and evolving. The sixth is the
 fact that the world is not a simple one,
 but is a complex one, in which many
 different things are going on at the same
 time.

The seventh is the fact that the world
 is not a uniform one, but is a complex
 of many different parts, each of which
 has its own characteristics and its own
 history. The eighth is the fact that the
 world is not a static one, but is a dynamic
 one, in which things are constantly
 changing and evolving.

The ninth is the fact that the world
 is not a simple one, but is a complex
 one, in which many different things
 are going on at the same time. The
 tenth is the fact that the world is not
 a uniform one, but is a complex of many
 different parts, each of which has its
 own characteristics and its own history.

Carriage of 16 "Schliessern," 4 "Schabaten," etc., to Newland, £38 6 9. Wood to stamp, £30.

Copper received by Anthoni Banckh, Mr. William Pellam's servant, on behalf of Queen Elizabeth, 145 cwt. at £3.

Ore smelted: massy ore, 2328½ cwt.; shaly ore, 910 cwt.; "Schlich," 22½ cwt. Ore won: massy copper ore, 1709 cwt.; shaly ore, 685 cwt.; massy lead ore, 10 cwt.; Colbenbruch, 2920 cwt.

Total expenses of term, £1145 5 1.

1569, HALLOWMAS RECKONING (RECHNUNG ALLHAYLIGEN).

Sept. 19. *Smelting*.—Items as before, £4 10 11½.

Building at Smelthouses: J. Scot, putting in rafters at the upper furnace for strengthening the cloth store, a new wheel-axle, and laths, etc., £2 17 6. At Newlands: W. Prugger's carpenters; Parseval Wudt (Wood), for cutting 5 rods planks; T. Bulfeld, for bringing to the cart 52 alders (Eldern) from the Moss, £9 13 6.

House.—11 bundles string bought in Cockermouth and 1 bed-cover bought in Keswick, 8/-.

Lead.—8½ cwt. from Thomas Robinson, £1 14 0.

W. Pürdt (Burd) sent by R. Fletcher and J. Grave, £200; and Radermacher by C. Worn, £100.

Allen Bellingham* deposited here on bill of exchange, £100.

Sept. 26. *Smelting*.—Sieves, coal tub, floor to copper furnace, etc., £5 2 5.

Isel Park.—Bark sold to H. Fletscher, £35.

Martin Andere bringing 40 kibbles lead ore from Caldbeck, £1.

Oct. 3. *Smelting*.—Usual items, and Niclaus Pundtin (Bunting) attending to the refiners (Saigern), 6 shifts at 6d.—£3 3 3.

Lead ore, 20 cwt., from Edwart Stuedt, £4.

Radermacher sent by Chris. Richartson, our messenger, in gold, £100

Hugo Sewel, parson in Caldbeck, paid cash, £5 7 9.

Bought from John Wilnson of Esness (Ashness) a wood in Barnthial (Borrowdale) called Heselboden (Hazelbottom), for coal, £4.

* Alan Bellingham, of Helsington, had bought from the Redmans, in 1561, land in Whinfell, and about 1568, Levens Hall. He married Catherine, daughter of Anthony Ducket, of Grayrigg, and in 1570 was knight of the shire for Westmorland. He died 1577, aged 61; epitaph in Kendal Church. Mr. W. Greenwood (*The Redmans*, p. 74) shows that Nicolson and Burn are wrong about the date of the sale of Levens; but surely he is mistaken in identifying the purchaser with the grandfather of this Alan.

The first of these is the fact that the United States is a young nation, and that its history is a history of growth and development. The second is the fact that the United States is a nation of immigrants, and that its history is a history of the struggle for the rights of these immigrants. The third is the fact that the United States is a nation of free men, and that its history is a history of the struggle for the rights of these free men.

The fourth is the fact that the United States is a nation of law, and that its history is a history of the struggle for the rights of these laws. The fifth is the fact that the United States is a nation of peace, and that its history is a history of the struggle for the rights of these peace. The sixth is the fact that the United States is a nation of justice, and that its history is a history of the struggle for the rights of these justice.

The seventh is the fact that the United States is a nation of freedom, and that its history is a history of the struggle for the rights of these freedom. The eighth is the fact that the United States is a nation of equality, and that its history is a history of the struggle for the rights of these equality. The ninth is the fact that the United States is a nation of unity, and that its history is a history of the struggle for the rights of these unity.

The tenth is the fact that the United States is a nation of progress, and that its history is a history of the struggle for the rights of these progress. The eleventh is the fact that the United States is a nation of hope, and that its history is a history of the struggle for the rights of these hope. The twelfth is the fact that the United States is a nation of love, and that its history is a history of the struggle for the rights of these love.

The thirteenth is the fact that the United States is a nation of faith, and that its history is a history of the struggle for the rights of these faith. The fourteenth is the fact that the United States is a nation of courage, and that its history is a history of the struggle for the rights of these courage. The fifteenth is the fact that the United States is a nation of wisdom, and that its history is a history of the struggle for the rights of these wisdom.

H. Fletscher, bill of exchange, £100; Symon Mossgraff *ditto*, £50.

Oct. 10. *Smelting*.—N. Pundtin [as before, and so in subsequent entries]; salt for the copper moulds (Grueben), 1/8.—£4 6 9½.

Tallow from Hainrich Anderson, of Newcastle, and from Cockhermouth, £4 8 10½. 100 lb. hops from Anderson, £2 0 4.

Oct. 17. *Smelting*.—P. Bautbe, stoking 8 smelting furnaces, etc., £6 10 1½.

Peat.—7200 loads at 120 the hundred from Christoffer Mayson, and carriage, £6 6 1½.

Building.—T. Scot, W. Hochholtzer, etc., £5 6 10; at Newland, carpenters, £1 10 0.

Sackcloth, 22½ yards at 4d. and 2 yards into the bargain, "zum flachen auf der Knappen Bograten," 7/8.

Radermacher sent by John Grave, in gold, £100.

Thomas Fallowfeldes* received from Mr. Wm. Pürdt (Burd) in London, £120, and in Keswick, £20, for 1200 loads charcoal to be delivered at Smelthouses between May and Michaelmas next, £140.

H. Fletscher received on a bill £100. Joris Lample repaid a loan, £20.

Oct. 24. *Smelting*.—£4 15 2. C. Mayson, 400 loads peat, 6/8.

Building.—T. Scot, etc., 17/-.

Lead ore from Thomas Archer,† 63 cwt., £12 12 0; from Anthony Dasson and Hue Watzon of Allendale, 185cwt. 21 lb., £37 0 9.

2 bed covers, 11/-.

Oct. 31. *Smelting*.—English labour: 35 piggins at 3d., 4 charcoal tubs at 9d., 5 sieves; C. Mayson, carrying out smelted stone; W. Stopp, 2 boatloads stone from Borrowdale, and 16 boatloads of birches from Baras for refining, £5 1 0.

Building.—T. Scot; C. Mayson for paving a floor in a furnace. 5/-; W. Stopp, boating timber from Vorwald to Milenstet, 2/6, —£1 1 8.

Wine.—11½ tuns Malvoisie, London to Newcastle, £2 6 0; unloading, 14/-; carriage Newcastle to Keswick on a cart, £32 0 2; bridge tolls at Newcastle, 15/4; customs in 2 places, 5/9. 15 tuns claret and white French wine, London to Newcastle, £3;

* Thomas Fallowfield, of Great Strickland, M.P. for Westmorland 1553. His son and heir was then Edward F. (*N. & B.*, i., p. 448).

† A Thomas Archer of Sowtergate was a Burgess of Kendal, 1552 (*Boke off Recorde*).

unlading, 7/8; for a certification, 2/5; hooping casks, 2/4; carriage on a cart, Newcastle to Barnardcastell, £11 5 0, thence to Keswick, £21; bridge tolls at Newcastle for 5 tuns, 6/8; for watching the wine by the way, paying a man who came with the carriers from Barnard Castle to Keswick, tolls in three places and drinks to carriers, £2 16 5; cooper for a new cask and hooping at Barnard Castle, 4/-. Richard Ledes to Newcastle and back, 10 days, and horse, £1 9 4; to Barnard Castle and Appleby (Appleby) again, Sept. 26 to Oct. 6, £1 2 4.—Carriage of 26½ tuns in all, £77 17 5.

Tallow.—R. Ledes bought at Newcastle 178 lb., £2 5 4.

Carriage of 8 tons iron, London to Newcastle, £1; thence to Keswick, £20; bridge tolls at Newcastle, 10/-; tolls in three places, 10d.; unlading at Newcastle, 8/-.—£21 18 10.

Carriage from Newcastle of 100 lb. hops, 2/8; of 1½ cwt. tallow, 4/-; of 72 lb. candles, 1/10; and of 2 casks vinegar, 4/-.

Queen Elizabeth has received by Mr. Anthony Parckh, Mr. William Pellam's servant, 165 cwt. copper, £495.

Symon Mossgraff (Musgrave) has delivered at Smelthouses, Nov. 6, 1568, to July 22, 1569, 8 fother 3 cwt. 12 lb. lead at £8 5 0 the fother=19¼ cwt.; and 8 fother 14 cwt. 14 lb. lead ore at £3 13 ¼ the fother.—£100 15 6½.

Men's families.—As last term.—£4 6 7½.

Wages.—M. Kiendler, £5 5 0; H. Reütter, £3 10 0; H. Wal-sitter, £1 1 0.

Horses.—Shoeing 11 times, 11/-; iron for cart, 7/1; 2 cart-wrights, 11/-; oats, etc., £11 11 4.—£13 0 5.

Board and beer, by Gregory Weiss, £22 6 0.

Travelling and messenger, £3 2 11.

Drapery sold to men, £17 16 10½; cover for feather bed, 5/-.

Wine sold to men, £39 0 2; beer to smelters by Gregory, £4 12 9.

Smelters as last term, £35 6 5. *Smithy* as last term [but for Parseval Hue is Parseval Athaw], £12 11 3.

Carpenters.—H. Regauer at 9/-; W. Hochholzer at 7/6; W. Prugger at 9/9.—£9 3 9. Charcoal to smithy, £8 13 10; tallow for smithy and smelthouses, £3 4 4; tools for smelters, £22 4 5.

NEWLANDS.—*Wages*: Häring, Syber, Berger for clerk work, Torer, Krümpühler, Fanginger, £5 2 6.

Contract.—Klockher and Böckh at Fürdernus, £13.

Tributing.—Kössler, Effendler and Wallner at *God's Gift*, £17 15 10.

Berger, Matzler, L. Prugger, Reindel, Schwaiger and Krümpühler at *God's Gift* in the shaft, £24 0 6.

Paintdner, H. Moser, Opperer, Hammel, Underwöger, Schram, Colmanstetter and Linsperger at *God's Gift*, £32 3 1.

Silbereysen, Gillig Högler, H. Dierickh, T. Eysel, Kalcher, J. Heysel, Weittgassner and Carius at upper workings at *God's Gift*, £24 5 8, less advances, 5/8.

Hofer, H. and P. Mair at *Franckenstein*, £13 15 4.

Schlegel, Schöpf and Buchberger at *Franckenstein*, £6 10 0.

Scheüher and Mitterholtzer at *St. Joseph*, £6.

Sorters.—Hagrig and Hutson at *Franckenstein*, £3 8 0. B. Moser, foreman sorter, at 10/-, £3 10 0; and 26 labourers at 6d., 5d. and 4d. a day, £19 13 3½.

Other English labour at *God's Gift*, sweeping, dragging ore, and loading sacks at 6d., and sweeping at 5d., £16 12 8; same at *Bagpipes*, 4/9½; at *Franckenstein*, £4 1 11; at *St. Peter*, 7/6; and at *St. Joseph*, 17/3½. Hue Lancaster bringing down ore from *St. Joseph*, 10/-. W. Athaw attending to ore in the Vorwald, 2/-. Wooden platters, 4d. John Buc, foreman of English labourers for 3 terms, 7/6. T. Bulfeld, felling 20 young oaks for use in mines, 9/8. Hainrich Brethart (Henry Braithwaite), tailor, making 3 mining frocks, 1/6. Carriage of 51 loads wood for pit-props (Gesteng), 8/6.

Iron for Newlands [to wage earners], 14/4½; tallow, £1 3 4.

Iron supplied to men [on contract, etc.], £5 0 10½; tallow, £5 9 8. Peat, £1 18 6.

Charcoal to Kolseysen and Hund, £1 15 0; work done by them for wage-earners at Newlands, £2 18 5; and 18 lb. steel, 6/9.

CALDBECK.—*Contracts*.—Wurtzer and Binder in the adit by the "*Rider*," £10.

Wages.—87 days sweeping at 6d., £2 3 6. B. Effendler, 5/6.

Tools and tallow, 2/11; Davit Scot, 6 loads peat, 6d. Symon Scot for a tarpaulin which the men have used for 14 weeks, 3/6. Straw on the "*Bograton*", 9d.; and 16 yards canvas, 5/4. Bedcover, 5/-. 7 yards canvas for lining 2 bedcovers, 2/4. Doby (Toby) Richartson, cutting 1 rod boards, 10/-. Martin Kep for stakes from the parson's wood, 3/5; J. Scot carrying them and boards from the men's house to pits, 4/-; the parson's man for bringing them to the men's house, 2/-. Reutter and Effendler fixing a sorting bin at the pits, 2/7. Heavy iron tools, wedges, big hammers, etc., 270½ lb., £3 7 7½. Tallow, 5/-. Smith's work and tallow supplied to the men, £2 1 8½.

Newlands Stamp.—Wages: Murr and Bodner, washers at 8/-; 12 "*Stockhknecht*" at 6d.; 153½ days help in washing ore

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at 5d., and 8 at 4d. W. Stopp, boatload of boards from Borrowdale to his house, 4d. 1 piece ox-leather for the "Datter Männlen," 1/4. H. Brethat, tailor, sewing 13 pieces "Plachen," 8d.; 60 yard sackcloth for *ditto*, £1 10 0; two persons sewing the "Plachen" to the sackcloth, 5d.—£9 18 4½. Iron and tallow, 13/6.

GRASMERIE.—Ore washers, Bodner and Murr, at 8/-. Ernwallner at 5/6; "Martin Ernwallnerin" (Janet, wife of M. E.) at 4d. a day. Edi Watson at 3/- a week. *Tributing*.—Nusspaumer at *St. Benedict*, 500 kibbles Colbenbruch at 3d., £6 5 0. *Sorter*—J Dambson, £1 17 0 *Wages* for 79½ days at 5d and 30 days at 4d. Roulandt Walckher carrying "Schiesser" and iron, 10/8. Heavy tools, £4 4 0, and 8 "Schiesser" steeled, £1 4 0. Tallow, 19/8.

Bought for Newlands from Edmund Radclieff 20 oaks used for props at the mine, £2. From Hugo Sewel, parson in Caldbeck, 40 oaks, £3.

Total nett expenses of term, £715 9 10½.

1569. CHRISTMAS RECKONING (RECHNUNG WEYHENNÄCHTEN).

Oct. 29.—H. Radermacher sent us by Robin Fletscher £100, and by John Grave £200.

Nov. 7. *Smelting*.—[Same men;] shovellers at 5d., 6d., and 8d.; lime for coppering, canvas, kelp, £4 18 9. Peat, C. Mayson, 4/2.

Building.—Prugger's 7 carpenters in the Vorwald, by contract between the Earl of Northumberland and us, £4 6 0. Hochholzer's 6 men in the Vorwald, and at Smelthouses "this side the water" setting up sheds for the furnace, cutting boards and nailing them, £4 15 4.

Our constables, Wyllem Grienaup (Greenop) and John Banckh, cloth for coats, £1 4 6.

Bought from Robert Heyson 20 yards coarse cloth at 12d., and from John Jantzson 10½ yards at 10d., £1 8 9; from Christoff Müllner (Milner) 53 yards sackcloth at 6d., £1 6 6; from Richardt Nelson 5 bedcovers at 5/6 and 6d. into the bargain, £1 8 0.

Drapery.—Coarse woollen cloth for a table in assay room; linen for 4 pair sheets and 7 towels in the house; canvas to line 3 bedcovers, £2 8 0½.

Lead ore.—20 cwt. 37 lb. from Edward Stuedt, £4 1 4; Hue Watson has delivered 45 cwt. 77 lb., £9 2 9.

Nov. 14. *Smelting*.—£4 1 5½. Nov. 21. *Smelting*.—£3 17 2.

Ground rent to Lady C. Radclieff to Michaelmas, 1569, 1/-.

Hans Reinbrun's accounts for carriage of charcoal, peat, etc. [I omit quantities, to shorten this long entry; but for charcoal from Furness the carriage per load ("Sam" or seam) was 2/4, from Calgarth 1/2, from Isel 5d. to 8d., from Borrowdale head 9d., from Grange in Borrowdale 8d., Vorwald to waterside 1d., and over the lake 1d.; for peat, from Skiddaw 2½d., from Flasco 4d., from Barron Moss 3d., from Mungrisdale 4d., and from Blackcrag 4d.].

Carriage of charcoal from Furness.—John Grigg, John Sandes, John Jackson, Raynald Holm, Wyllem Hodgson, Lorence Brethat, Wyllem Walker, Bernard Benson, and John Riggess.

From Calgarth.—Rogier Knott of Gresmer (Grasmere,) Roulandt Walckher, also John Graislav, coaling 3 hund. and 16 loads at 6d., £9 8 0, and 62 at 4d., £1 0 8, and given to him when he went home, 4d.

From Isel Park.—Nicolaus Man, Wyllem Bell, Thomas Robson, John Bonting, John Skott, Richard and Jaemes Wylmson, Richard Mayson, Robert Kartter, Henry Banckh, Parseval Walker of Castrig, Robert Gräve of Schmethwayt (Smaithwaite), John Judall (Youdall), Henry Wilson of Coilbeckh, Richart Attkinson of Sonderland, Gawyn Robinson, Mylles and John Deneson; also Robert and Wyllem Pyrson (Pearson), cutting wood, Conrad Haintzelman several journeys to Isel, 3/6, Rychardt Fischer, foreman at Isel, at 2/- a week; making 152 sacks at ½d.; Nicolaus Dee, dinner at Isel, 4d.; 386 days' work in Isell parckh cutting at 6d. and 8d.; Richard Arras, coaling 333½ loads at 4d. and 10 which he cut and coaled at 9d.

From Borrowdall grainge, Thomas Fischer, John Langstraitt (Langstrath); also John Fischer and John Judall, making a path in Borrowdall, 10/-. Bernard Sewer, Mylles Wright and Robert Taillour cutting and coaling 198½ loads at Gawayn Harry's in Barrowdall at 8d.; Thomas Haynes and Henry Lancaster cutting wood at Gawayn Harry's and "bringing from fell to land" the above 198½ loads £3 10 0.

From Barrowdall head, Gawyn Fischer of Barrowdall and Thomas Fischer.

From Vorwald to waterside.—Mongo Alkorn, also 1 load kelp. From Vorwald here by land at 4d., various farmers (Bawren von Köswickh). Across water Christoffer Kytson and party. Also John Digson helping to load, and Rychardt Waynwright cutting and coaling. In all, £100 6 1½.

Carriage of peat from Skiddaw. N. Man, Robert Grave, Robert Gräve of Smetherhowe, Robert Wattson, Rychardt Wyllemson,

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John Beckh, John Peel, Thomas Casse, John Kydson; also Jaemes Graf of Nadell, graving 1 thousand, £5; John Gaitskell, foreman on Skido, 205 days at 5d., and 45 days turning wet peats at 3d.

From Flasco.—Thomas and Christoffer Lancaster, John Dockwray, Wylllem Robinson, Richardt Gräf (Greave) of Bornes, Thomas Byreckhead and John Grinhowe (Greenhow), Kuttbart Atkinson, John Attkinson, John Wilkinson, Edwardt Wilson, Parsevall Worn, Wylllem Tourner, Henry Haggard, John Grys-dall, John Attkinson of Grys-dall, John Worn of Thrilkett, John Bawnrickh (Brownrigg), Christoffer Lancaster, Christoffer Kyttson.

From Barron Moss, John Hodgson of Gauswell.

From Gris-dall (Mungrisdale), John Wilton, Robert Wilkinson, Wylllem Robertson, Christoffer Tonder (Todhunter, as appears later), Rychardt Skot, Mylles and John Deneson.

From Black cragge, Wylllem Fischer Canner, Mathew Hodg. In all £307 19 7½.

Colliers.—[Some cutting and coaling, some coaling only.] Humfry Bolsworthe at Ysellparckhe, John Kouckh (Cook) at Iselparckh, John Plaglier (? Blacker), Rychardt Stockhton, Anthony Fischer at Isellparckh, Henry Bouth at Borrowdall (also for making a road from Borrowdall grainge for the coal, 10/3), Petter Khorn at Isellparckh (also making 74 coal sacks at 1/2), Rychardt Arras at Isellparckh and Linge-banckh. Rogier Engmander, Mr. Thurlandt's collier, for acting as foreman until Nicolaus Dee came here, £3. Nicolaus Daye's travelling to Kawgart 4 times, and horse 4/-, and again 10d. For making a gate at Kawgart, to go in and out to the coal, 5/-. Four women 12 days collecting chats (Reysach), 10/-.

Stonecoal at Bolton, by H. Reinbrun's account. Ropes and shaft kibbles carried there, 1/-; tallow and candles, 5/-. Brushwood (Reysach) in the shaft,* 1/6. Given to colliers and men when coal was first found, 1/-. Roof to house over the shaft, 6/-. Carpenter making the house, 15/-. Making wall round the house, 10/6. Sept. 15, to a coal miner to go and see pits at Blindenkrackh (Blencrake), 1/6. Oct. 15, Matthew Brough, carpenter, timbering the shaft, 15 days at 8d.; his man, 14 days at 7d. The smith at Bolton mending shaft kibbles and making sacks, 1/-. Nov. 25, M. Brough and his son timbering shaft

* To fire the rock and soften it for wedge-and-hammer cutting? Gun-powder was not used in mining until about a century later.

The American Medical Association is a non-profit corporation organized for the purpose of promoting the interests of the medical profession and the public. It is composed of the members of the American Medical Association, the American Association of Colleges of Surgeons, the American Association of Obstetricians and Gynecologists, the American Association of Physicians and Surgeons, the American Association of Pathologists, the American Association of Bacteriologists, the American Association of Microscopists, the American Association of Anatomists, the American Association of Physiologists, the American Association of Pharmacologists, the American Association of Chemists, the American Association of Biologists, the American Association of Astronomers, the American Association of Geologists, the American Association of Meteorologists, the American Association of Zoologists, the American Association of Entomologists, the American Association of Botanists, the American Association of Fungologists, the American Association of Algae, the American Association of Lichens, the American Association of Mosses, the American Association of Ferns, the American Association of Gymnosperms, the American Association of Angiosperms, the American Association of Insects, the American Association of Fishes, the American Association of Amphibians, the American Association of Reptiles, the American Association of Birds, the American Association of Mammals, the American Association of Monkeys, the American Association of Apes, the American Association of Man.

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14 days, and his man 5 days. Two stonecoal miners "to look for a coal-pit at Caldbeck"? 2/6.—£4 3 7.

Lime for smelting, by Reinbrun's account: Christopher Mayson carrying 1 thousand loads, £10; Mabell Wilson, 5 hund., £5.

Carriage of ore, by Reinbrun's account: John Bulfylde (Bulfell) from the hinder houses (hindern Gebewen) to Newlands stamp, 5 hund. kibbles Colbenbruch; Edwardt Wilson of Wayborn (Wythburn), 1 hund. *ditto* from St. Joseph; Lorence Brethwayt, 1 hund. kibbles ore from God's Gift to waterside, and 1 hund. from water to Newlands stamp, £4 11 8.

Lead ore, by Reinbrun's account: Aug. 20, Thomas Robinson of Thesdall (Teesdale), 6 cwt, and Aug. 31, 4½ cwt. at 4/-.—£2 2 0.

Travelling, by Reinbrun's account: June 25, R. Ledes and H. Reinbrun to Graistockh, 3d.; June 27, *ditto* to Fournes, 4/10; July 18, *ditto* to Graistockh, 4d.; July 27, *ditto* to Carlin (Carlisle), 2 days, 3/-. At Cawdbeckh to the parson's man, 6d. Letter from Cawdbeckh to Mr. John Dalston, 4d. Aug. 15, Ledes and Reinbrun to Fourness, 4 days, 6/8; Aug. 24, to Carlin, 3 days, 8/4. For a Præcept to mend the road, 1/6. Sept. 14, Ledes, Reinbrun and Nicolaus Daye to Pireth (Penrith), 2 days, 4/-.—£1 9 9.

Total expended by Hans Reinbrun, £536 19 8.

Nov. 21. *Smelting*.—£4 0 2.

Building.—John Sanderson, 4 rods boards, £2 4 0; Christopher Worn, roofing a "Schlich hof" (? ore shed) at the Vorwald with frames (farmen) and sods, 8/-.

Rent.—John Bulfyld, 2 rooms and cellar, May 1, 1569-73, £8.

H. Fletcher paid on a bill from Radermacher, London, £100.

Radermacher sent by Robin Fletscher, Nov. 22, received Dec. 6, £100.

Hugo Sewel, parson of Caldbeck, wood, £1.

Men's families.—Jörg Deuferer's children in Schwatz have received less than was deducted from his pay, 15/-.

[Here follow expenses paid in Augsburg by Haug & Co., or by agents in London, etc., and struck through by H. Loner as not properly belonging to this Keswick account:—]

Feb. 18.—Carriage 4½ cwt. lead, Augsburg to Hailbrun [on Neckar, on the way to England], 3 florins.

March 23.—Messenger to Castein (Gastein) on behalf of smelters sent by Höchstetter, fl. 7 14 0. Articles for assay, fl. 7. Melchior Newsiedler for 24 dozen "Saitten," given to Johan Thanwoordt (Tamworth), fl. 8, and sent as a present to the Queen.

Feb. 25.—Hans Müller, innkeeper, for 6 men and 1 woman Feb. 15 to 25, fl. 27 3 4. Same travelling to Cölen, fl. 20. Ulrich Schwaiger (of Augsburg) cutting a seal for the Mining Co., fl. 10. Reichel's and Colmanstetter's wives through Höchstetter, Nov. 19 to March 18, fl. 14 8. 2 books for Reinbrun, fl. 14 14 8.

Feb. 14.—Carriage of box of copper "Seeneysen" * from Inspruckh, fl. 1 6 4.

March 29.—Elias Puesch (or Buesch), notary, for power of attorney from Loner to Höchstetter, fl. 1 4 0. Jörg Lachenmair at Rottenburg [Rattenberg in Innsthal, Tyrol] and Bernhart Roch at Schwatz, their accounts Jan. 1 to Feb. 26, fl. 35 12 0; and on May 13, *ditto* from Feb. 26 to April 1, fl. 39 1 0.

May 18.—Reichel's and Colmanstetter's wives, fl. 6 8 0, and July 8, men's wives in Schwatz and Rottenburg, fl. 39 9 0.

Aug. 5.—Hans Seydenfaden, a silver refiner, who came from Nurenberg at our request, fl. 6. Albrecht Scheyrl, Röbel's expenses at his house, fl. 12 16 0.

Aug. 6.—Reichel's and Colmanstetter's wives, fl. 10 8 0.

Aug. 22.—The Schwatz messenger, for riding back the horse on which Röbel had come here, fl. 1 10 0. H. Röbel's account, fl. 31 15 4; balance of his expenses to England, paid in Schwatz, fl. 150, and Augsburg to Schwatz, fl. 3 14 0. Carol and Hans Rosenberg for 12 stamped copper Seeneysen, fl. 18 13 4. Hans Puesch in Hailbron, freight of lead, fl. 1 1 0. Hans Faust in Maintz, sending 6 men and 1 woman to Cölen in spring, fl. 14. Johan Moiss at Cölen, for the same, fl. 13 6 8, and for crucibles and muffles, fl. 6 18 0. Faust for H. Röbel's journey, fl. 16. In all, fl. 521 2 8=£97 14 3.

The six men and a woman, Wolff Binder and party, cost from Feb. 15 at Augsburg to Dynkirckhen (Dunkirk) travelling by Maintz, Cölen, Dort and Anttorff, with money to take them to Keswick, £31 1 1.

A pair of pistols formerly belonging to H. Reinbrun, bought by Höchstetter and given by Ulstät to Mr. Anthony Duckhet, £2 15 2½.

May 23 and June 23.—Thomas Schmid, customier (Customer Smyth), paid £300; Wm. Bürdt, balance of his share, £300 and £240.

Mr. Hary Sackhfielde's servants for 15½ tuns Rossel (? Rochelle) wine, £73 14 0. May 24, crucibles and muffles to Grenwysch

* See pp. 53, 76. The total weight was 96½ lbs., and the whole cost, with carriage, was £4 0 1, to be divided between Grasmere and Newlands stamps.

(Greenwich), £3; 5 casks to pack them, 5/-; straw and Trinckh-gelt, 1/-. May 22, steelyard, £1 10 0. May 24, half-dozen wine taps, 5/-. 1 dozen tin spoons, 1/-. Caspar Loner bought from Thomas Königstorffer new dagger sheath with knife and awl, 1/2; etc.

[End of the Augsburg, Antwerp and London accounts.]

Dec. 5. *Smelting*.—£3 14 8. Radermacher sent us £100.

Cloth and sackcloth, £2 2 9.

Dec. 12. *Smelting*.—Coal and kelp sieves, 4 coal tubs, 12 piggins, etc., £4 10 4. Lead ore from E. Stuedt and H. Watzon, £3 16 6.

Cloth and lining, £1 3 9.

Tallow.—26½ lb. lard at 3½d.

Radermacher sent £100. John Darston in London paid on a bill of exchange, £10.

Charcoal.—Reinbrun paid R. Engmänder, collier to T. Thurland, and Joris Lamplin (Lamplugh) for 226 loads, £26 7 4.

(The above part of Xmas Accounts received Augsburg, Feb. ult°, 1570.)

Drapery.—U. Frass sold cloth, fustian, satin, etc., £27 17 11.

Dec. 19. *Smelting*.—An ell of cloth given to J. Deuferer, 7/-. Robert Kneip and Lorentz Prethat (Braithwaite) carriage of lime, etc., £5 8 2½.

Rent.—Roulandt Walckher's widow at Gresmor, house for workmen to Martinmas, 15/-. Cristl Clarickh's widow at Newlands, for room in which the watchman lies and keeps all his iron and tallow, to Jan. 1, 10/-. Hue Fischer, at Newlands, house in which the single men live, to Oct. 16, 17/6. Thomas Bulfeldt at Keswick, for a wood-yard, a wine-cellar, a store-room, a garden and a brewhouse, £1.

House.—Bought from Meils Faschet, cabinet maker (Kistler), 3 bedsteads, a table and 4 forms, that were Mr. Thurland's, £2; also 7 ells linen at 6d. for table napkins (Firtuechern und Faceleten in d. Speiskamer).

Sackcloth from Christoff Müller, 37 ells at 6d.; bought in Keswick 27½ ells at 4d.

Malt from John Buckhbar at 28d. to 25d. a bushel, £3 16 11.

Tallow from Nicolaus Barckher in Cockhermuth, £1 19 4.

R. Kneip and L. Prethet, carriage of ore, Millenstet to Smelthouses, £1 6 0. John Richartson and Christoffer Worn, help in loading ore, 12/1.

Wolff Prugger and Wolff Hochholtzer, master carpenters, a pair of breeches (hosen) each, as promised when the Smelthouses

and the 2 stamps and all their appurtenances should be finished, and now, praise God, it is finished, £1 12 0. Also to a plumber for a lead pipe for water works, 18/-.

H. Radermacher sends by W. Stable, £200, and by C. Worn, £100.

Expenses of 4 men lately sent hither, £9.

John Wilson, shopkeeper, account for goods supplied to our men, £80.

The Earl of Northumberland for charcoal, £4.

(The above part received in Augsburg, Jan. 23, 1570.)

Dec. 31.—Balance of payment to Sir George and Lady Radcliffe for Barras wood, bought March 1, £26 13 4.

The Earl of Northumberland has delivered during 1569 444 seam of the 1200 of charcoal promised, and paid for in advance. For the coal as yet undelivered, 360 oaks in the Vorwald, and the birches in Brandelaw, have been felled.

Smelting.—£7 3 8.

Building.—T. Skott 41 days at 10d. making cartwheels; John Skott at 10d.; Robert Crassat, R. Crassat (junr.) and Robin Jackhson at 8d., cleaving laths; 6 carpenters helped finish roof to furnace and ore sheds*—J. Crassat, Robert Worn, Edmundt Worn, Parsevall Fischer, John Fischer and Hue Waltson at 8d. Two slaters, Robert Gyrbj at 12d. and his son at 8d. Adam Stuedart carrying 2600 slates from quarry, 15/7. Given by M. Steinberger at D. Ulstet's desire to the Englishmen who brought the plant for silver-refining (Dreybhuet) to Smelthouses, 2/-.

Carriage of steel, cash, etc., by Wm. Staule, £6 1 4.

Locksmith, for a lantern at Smelthouses, 3/-; a lock to the timber shed, 8d.; ain Kamer Bot, 10d.

Gregory Weiss, malt 165 bushels, for 3 terms, £21 7 6; beer drunk in the house, 2 terms, £7 10 0; beer drunk by men this term, £16 6 3; wine, £45 3 4.

Wages: Kiendler, 8 weeks, £6; Reütter, £4; Walsitter, £1 4 0.

Men's families.—Deuferer's children and Colmanstetter's, W. Prugger's, Reindel's and Reichel's wives, £4 4 0.

Horses.—Shoeing 17 times, £1. Iron for waggons and cart ("Wägen" and "Karren"), £4 11 8, and smith, 9/10. 2 English carters and horses, £7 9 0.

Board and beer, by G. Weiss' account, £27 4 5½; travelling, £8 5 1.

* "Schlichhöfen" I suppose may be so translated, though I can only infer that "Schlich" means some kind of ore.

Petty cash by U. Frass' account, £1 16 10.

Smelters wages.—T. Wallner, foreman and copperer, at 13/6; also as promised when 1000 cwt. of copper should have been made, he is to receive for 20 shifts overtime, between April 30, 1568, and Jan. 1, 1570, at 27d., £2 5 0. U. Stamper at 9/- and 7/6 extra, and for overtime 18/-; J. Staudacher at 9/-; B. Purenberger at 9/- and for separating the silver, 1 shift at 18d.; J. Deuferer at 9/- and overtime, 12 shifts at 18d., and separating silver, 3 shifts at 18d.; B. Fechtenbach at 9/- and for cleaning kelp on both occasions for separating the silver, 4 shifts at 18d., and for helping in the process, 6 shifts at 18d. R. Schrottenberger, B. Böllinger and H. Altschmer at 8/-; S. Zaisacher at 8/- and 1 shift overtime 18d.; H. Regawer at 9/- and six shifts separating the silver at 18d., W. Prugger and separating silver, 14 shifts at 9/9 a week.—£50 14 10.

Smithy.—Scrap iron returned, 12 cwt. 28 lb. at 1d. the lb. Wages: H. Setzenstollen at 10/- and 10 days overtime; A. Ringseysen at 8/-; Digs Watterson at 4/-; Parsevall Athow at 4/-.—£16 19 0. Used in smithy, 88 sacks charcoal at 14d.

Building.—W. Prugger, 8 weeks in the Earl of Northumberland's wood, £3 18 0; W. Hochholzer at Smelthouses, £1 10 0.

Tallow at smithy and Smelthouses, 105 lb. at 4d.

Carriage of ore and Horses.—1056 kibbles carried to Smelthouses at 10d. the fother of 12 kibbles. Wood, stone, sand, etc., carried by our horses to Smelthouses, 136 fother at 1/- . Charcoal from Iselpark ditto, 34 loads at 8d.

NEWLANDS.—*Wages:* H. Häring, foreman at 10/- and £3 for extra work; B. Moser, foreman sorter, at 10/-; C. Klockher and C. Böckh 4 weeks at 5/6; C. Fanginger 5 weeks at 5/6; A. Torer 1 week 5/6 and hewing 2 fathom £1 16 0; E. Weytgassner 2 days at 5/6 the week.—£16 5 0.

Contracts.—C. Klockher and C. Böckh in shaft at *Fürdernus* adit, and for 102 kibbles massy ore, £7 9 0.

Tributing.—G. Kössler, B. Effendler and F. Wallner at *God's Gift* and ore won, £10 8 4.

M. Berger, H. Matzler, J. Schwaiger, L. Prugger, A. Reindel and H. Krümpacher in shaft at *God's Gift*, and ore, £29 2 10.

H. Paindtner, H. Moser, H. Opperer, H. Underwöger, H. Hammel, N. Schram, J. Colmanstetter and P. Linsperger at *God's Gift*, £21 10 5.

G. Silbereysen, G. Högler, H. Dierickh, T. Eysell, S. Kalcher, J. Heysel, E. Weytgassner and M. Carius at *God's Gift*, £13 11 9.

A. Torer and C. Fanginger at *Bagpipes*, £2 3 10.

J. Hofer, H. Mair and P. Mair at *Franckenstein*, £13 3 0.

U. Schlegel, T. Schöpf and S. Buchberger at *Franckenstein*, £19 7 0.

J. von Syber at *Hamblin*, £1 13 6.

H. Richter at *St. Peter*, two terms, £7 15 2.

M. Scheucher and R. Mitterholtzer at *St. Joseph*, £4.

Sorters.—J. Hagrig and J. Huttson at the *Bagpipes Nick*, 215½ kibbles massy ore at 4d., and 884 k. Colbenbruch at 1d., £7 5 6; their sorters, £3. John Dambson at *St. Peter* and the *Hamblin*, 53 kibbles massy ore and 266 kibbles Colbenbruch, £1 19 0; his sorters, £2.

Sorters on time work at 5d. a day [various lengths of time from 5 to 46 days]: Martin Burngeith (Burngate), Adam Wyllemson, John Dambson, Edi Jackson, Thomas Dauson, John Bell, Hary Fysher, Edi Alleson, Adam Pirson (Pearson), Dickhe Kupperer, Toby Normandt, John Dauson, John Normandt, Jaemes Dickheson, Wyllem Herbey, Christell Pirckhet (Birkett), Robert Dambson, John Barnes,* John Ponner, John Bue, John Fletscher, Thomas Hundter, Meils Watson, Thomas Fyscher, Nicolaus Dickheson.

Sorters at 4d.: Scheils (Giles) Watson, Dickhe Prethat, Petter Schmidt, Hary Kupferer. Sorter at 3d.: Wyllem Pliegg.

English workmen at *God's Gift* at 5d.; Thomas Larickh (Clark), Edwardt Egelsfeldt, Joris Fyscher, Cristell Wurthon (? Warton), Jaemes Bue, Dickhe Walckher, Dickhe Fascheit (? Fawcett), Dickhe Fyscher, Jaemes Larickh. Foreman, John Bue. All these have swept.

Shifts at 5d. dragging ore, John Daum, Thomas Ponner, John Huttson. Dividing the ore and making up loads, Wyllem Furring, John Wyllemson, Toby Bue.

Shifts at 4d. with the sweepers, Hary Penson and John Raulon (? Rowland). At the *Bagpipes*, John Stuedtart. At the *Franckenstein*, John Willemsen, John Fyscher of Thornthwait, Thomas Fletscher, Wyllem Walckher. At *St. Peter*, John Bue.

At 5d.: at *St. Joseph*, Thomas Judall (Youdall), Robert Mayson. At the New Cut below Littleton (Littel Thun), Dickhe Fascheit, Dickhe Fyscher, Thomas Fletscher. D. Faschet and D. Fyscher have also worked at sweeping in the Nick below Littleton, 4/-. Add also Wyllem Fiering who has dragged ore and swept, etc., at 5d.

* This name, like some others here and there, is written in English, not German, letters, as if copied from notes by the English foreman, and not by ear and phonetically, as most names are written.

Mang (Mungo) Alkorn carrying wood, 1/-.

Total at Newlands, £198 1 3½.

Smith-work for men on wages at Newlands, 17/4; tallow, £1 16 8. Iron supplied to men on contract, etc., 239 lb. at 2½d., tallow, 286 lb. at 4d.

Charcoal supplied to Kolseysen and Hund, £2; steel, 7/6; rent of their smithy, £3 0 11.

CALDBECK.—Contract: R. Wurtzer and W. Binder at the *Rider*, and 6 kibbles ore, £9 2 0.

Tributing.—J. Reichel and H. Hellensteiner *ditto*, 35 kibbles massy ore at 2/-, 136 kibbles "Mitterertzt" at 2d., extra (hilff gelt) for 2 fathoms, £2; they also took 1 fathom on the lower Nick, £2. Each has done 2 weeks time-work at 5/6, £9 14 8.

Sorters.—Edi Alleson and Edi Jackhson, £1. Wyllem Mann, £1 2 6.

Sweepers at 6d., W. Mann, T. Wyllemson, Anthonye Sanderson, Wyllem Skott. Waller at 7d., Michel Bauman. Martin Geb (later "Kepp") has carried various tools from Symon Scott's house to the mine, etc., 2/8. 1½ scam stonecoal, 6d. A bedcover, 5/6. 20 scam peat, 5/-. Toby Rydson (Ritson) for cutting 1 rod boards, 10/-, and for cutting stakes and fixing props, 1/10½, and his man 1/6. To the parson for 1 fother wood to mine, 1/-.—£4 3 8½.

John Skott carrying 2 fother boards from the wood to his house 2/-, and 6 loads house-furniture to the men's lodging, 1/-. Martin Kepp carrying 26 planks to pits 1/8. H. Reutter spent on 2 visits 9d. John Skott for 20 loads peat 4/2. M. Kepp, 20 loads peat 4/2. Carriage of 2 fother wood for fuel at 1/-. Taking mine and drag-troughs from Smelthouses 1/-. Doby Rydson, 1 day fetching wood to the path 7d.

Total at Caldbeck, £26 0 2½.

Tallow, 1/-. Supplied to men (on contract): smith-work, 2/1; iron, 13/4; tallow, £1 7 2.

GRASMERE.—C. Bodner, foreman washer, at 8/-. M. Ernwallner, ore-washer, at 5/6. S. Nuspaumer, tributing at St. Benedict near the stamp, 282 kibbles Colbenbruch at 3d. J. Dambson sorted same at ½d.

Time work at 5d., J. Watson, W. Watson, John Addlon; at 4d., Ernwallner's wife; at 6d., Edi Watson, ore-washing.

Roulandt Walckher carrying tools, tallow, etc., at 8d. a load.

Bedcover, 5/6; 21 ells sackcloth for the stamp, 10/6; 1 oak for the stamp, 4/-.

Total at Grasmere, £13 19 4½.

Also 7 Schiesser, new steeled, £1 10; tallow, 15/8.

Newlands Stamp.—S. Murr, foreman washer, at 8/-. Men at the stamps: Toby Hutson and Thomas Stanger at 6d., Hue Penson and Wyllem Schnadel at 5d., Thomas Crassat at 4d. Ore-washers: Barbara Paintdnerin (Paintdner's wife), Anna Hundtin (? Agnes Hund) and Elisabeth Weittgassnerin (? Isabel Weitgassner) at 5d.; Deni Fyscherin (? Jenny Fisher) and Nane Fyscherin at 4d. 32 ells sackcloth at 6d. Drinks to Newlands farmers who helped to carry the wheel-axle, 1/6.—£7 12 5.

H. Reinbrun's account for carriage of ore:—Robert Mayson, 3 hundred kibbles from *God's Gift* to the water in the Vorwald (Copperheap bay?) at 1¼d.; 1 hund. from the back buildings (von den hinderen Gebewen) at 2¼d., and 4 hund. ditto at 8/4 the hundred. Wyllem Fyscher Gilbanckh, Rychardt Tyckhell, Thomas Haynes, John Fyscher Gilbanckh, Margreth Klearckh, John Bowe, John Sanderson of Kawdbeckh, Robert Kneipp, Lenard Kneipp and Mylles Rigges, various quantities to the lake side or Newlands stamp.—£62 17 1.

Reinbrun for carriage of peat:—From *Skydo*, John Beachh, John and Robert Rydson, Gawyn Radclief. From *Flasko*, Thomas Robinson, John Gaytskart, John Gilbanckh and Christoffer Lancaster, John Atkinson of the Banckhowse, Christoffer Bonting, Wyllem Skot, John Graffes of Bowrnes, Robert Atkinson, Rychardt Graue of Bowrnes, John Graffe of Wanthwayth, Wyllem Sutton. From *Blackhcragge*, John Thwaythe, Nicolaus Styll (Steele), Mathew Hodg, Wyllem Hudgson of Thorntwayth, Wyllem Fyscher Canner. From *Grisdall*, Thomas Cannon, John Hudgson of Thryleket.—£138 11 2.

Reinbrun for charcoal:—Carriage from Fournys (*Furness*) at 2/4, Bernard Walker, Wyllem Brethwayth, Wyllem Dogson, Roulandt Thomlinson of Grysdall, James Jackhson of Hawcksead, Rychardt Opffel.* From *Isellparckh* at 8d., Nicolaus Fornys (*Furness*), John Digson, Anthonye Willemson, Thomas Kartter, Edmondrt Radclieff, Nicolaus Wyllmson, John Brathwayt the younger, Wyllem Bell, Robertt Kartter, Robert Bowe's wife, John of the Howe, Mylles Wyllson, Houghe Standlye, Robert Graffe's wife, Parsevall Woudt of Keswick, Richard Joudall, Rychardt Mayson, Rychardt Brusko, John Rydson, Myles Fischer, Thomas Barchher, Petter Beckh's wife, Wyllem Gaskell, John Beckh, Wyllem Hudgson, cordwaner, John Buckbarrow,

* Later Affel, for a'Fell. Richard Ffell was married at Hawkshead 1576.

Wyllem Lawson. Also John Dryuer (Driver) at 4d. From *Borrowdall head* at 9d., Fyscher of the Grainge. From *Borrowdall Grainge* at 8d., Robert Kneipp, Parsevall Rattlyeff Baylyff, who also carried from Gawyn Harry's (in Borrowdale) at 4d.

Colliers.—Rogier Engmander, Mr. Thurland's servant, sold us 27 seam charcoal at 28d., and coaled 211 seam at Isel park at 4d. Humfry Bolsworth coaled 420 loads at 4d., and cut and coaled $74\frac{1}{2}$ at 8d. Richard Arras coaled $228\frac{1}{2}$ loads at Isel park at 4d. Anthonye Fyscher cut and coaled 186 loads at Isel park at 8d., and felled, cut and coaled $23\frac{1}{2}$ at 9d. Paid at Kawgarth (Calgarth) for cutting 327 "Kordes" of wood, £7 16 3.—£81 13 11½.

Reinbrun for stonecoal:—Thomas Base carrying 16 fother wood Isellparckh to Bolton at 20d., and 11 at 3/-. John Hodg and company for 144 loads stonecoal at 8d. A coal miner sinking a shaft, £7 11 0. John Porter's carpenter, 31 days' work at Bolton at 7d.; Mathew Hodg, 25 *ditto* at 6d. 15 days' work and 15 night shifts pumping water at Bolton at 5d. 14 days' work clearing out shaft and timber when it had fallen in, at 5d.—£17 4 7.

Reinbrun for lead:—Wyllem Huttysen of Rychmond at 10½ cwt., £4 6 9; and for lime:—John Hodgson $2\frac{1}{2}$ hund. loads at 2d.

Reinbrun for travelling:—Dec. 14, self and horse to coal-mines at Bolton, 9d. Aug. 28, Nicolaus Daye 8 days, and horse 2 days, to Kawgart (Calgarth), 4/7. Oct. 18, N. Daye to Kiendall to get money from Robert Bendlos, 1/1, and to Fournys, 3/2.

Reinbrun for lead ore:—John Gargett, 4 fother 1 cwt. 15 lb. at £4, and 8 fother at £8 5 0—£82 4 6; making Reinbrun's total disbursements, £389 17 7½.

Net expenses of the term, £933 6 4½.

Net expenses of the year 1569, £6908 13 4½.

APPENDIX

10

The first of these is the fact that the number of cases of the disease has been steadily increasing since 1880. This is shown by the following table, which gives the number of cases reported in each year from 1880 to 1890. The number of cases in 1880 was 1,000, and in 1890 it was 1,500. This shows an increase of 50% in the number of cases in the course of ten years. The second of these facts is that the disease has been spreading from the coast to the interior. This is shown by the following table, which gives the number of cases reported in each district from 1880 to 1890. The number of cases in the coastal districts in 1880 was 1,000, and in 1890 it was 1,500. This shows an increase of 50% in the number of cases in the coastal districts in the course of ten years. The third of these facts is that the disease has been spreading from the interior to the coast. This is shown by the following table, which gives the number of cases reported in each district from 1880 to 1890. The number of cases in the interior districts in 1880 was 1,000, and in 1890 it was 1,500. This shows an increase of 50% in the number of cases in the interior districts in the course of ten years.

The fourth of these facts is that the disease has been spreading from the coast to the interior. This is shown by the following table, which gives the number of cases reported in each district from 1880 to 1890. The number of cases in the coastal districts in 1880 was 1,000, and in 1890 it was 1,500. This shows an increase of 50% in the number of cases in the coastal districts in the course of ten years. The fifth of these facts is that the disease has been spreading from the interior to the coast. This is shown by the following table, which gives the number of cases reported in each district from 1880 to 1890. The number of cases in the interior districts in 1880 was 1,000, and in 1890 it was 1,500. This shows an increase of 50% in the number of cases in the interior districts in the course of ten years.

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“EXCURSIONS AND ALARUMS,” 1570.

THE *Keswick Journal* of 1569 is not only the fullest of the series, but it has been given in considerable detail to show the various branches of the Company's work, and their manner of conducting the business. For 1570 there is no *Keswick Journal*; there are only notes in sheets of summarised returns and some entries in later volumes from which a few statements can be gathered.

A special piece of business to which reference is made later may be mentioned now, to disentangle it from the thread of the story—the attempt to form charcoal-burning stations in Ireland. As early as September, 1565, there was a proposal to get wood from Ireland, and in 1568 we have seen George Needham inspecting the coast from Ravenglass to Workington (p. 28); letters in the State Papers tell us the Company wanted land for a wharf, and that they bought it from Mr. Curwen at Workington in October, 1568. The landing of goods at Workington is often referred to, though less often than one would suppose if the Company had their own port there and sent goods by sea from London to it; most of their goods came and went by way of Newcastle, in spite of the expense of land carriage over Stainmoor and through Barnard Castle. It looks as though the wharf at Workington was intended for this Irish project, and that after the abandonment of the project the wharf was not much used. The accounts of Richard Springham's journey to Ireland are rather scanty, but they serve to explain references in one of Loner's memoranda of 1569 to the “Lord Debito von Ierlandt,” and

occasional mention of "Herr Debiti"—the Lord Deputy.*

July 16, 1571.—R. Springham's account for land and ground bought in Ireland by him and the lord Debito of Ireland for the Company :—Paid to Joann Whüt (John White ?) for 3 years, Michaelmas 1569 to Michaelmas 1572, £10 for each year—£30, and to Wm. Blackmei for all his ground for 3 years, May 1, 1569, to May 1, 1572, £8 a year—£24. Further paid [in travelling] with a servant, £70 14 6. The Company has to pay Wm. Blackmei, at the end of 3 years, £120, and the land is ours. Melord Willum Seyders (? Seydene) debito von Ireland has paid Richard Springhain on our account, £80. Alderman Duckett paid him for travelling expenses, £30. W. Sydere (? Sydene) repaid out of the special account, £80. Special account owes the Company £14 4 6, being balance of R. Springham's account, namely, Joann Whit £30, W. Blackmei £24, and expenses with servant £70 14 6 = £124 14 6.

A few Augsburg entries for 1570 occur :—

March 13.—Bernhard Roch in Schwatz for H. Hellensteiner, Jorg Hellensteiner and Sebastian Zeindel, £31. March 27.—Jorg Lachenmair and B. Roch in Rattenberg and Schwatz for A. Reindl's wife, J. Teufferer's children, Cristoff Bodnerin (C. Bodner's wife), Wolff Prugger's wife, £6 11 3. Given at Augsburg to Jörg Bachmair, miner, 3/9. Paid at Augsburg to J. Reichel's and J. Colmanstetter's wives, £2 6 6.

May 15.—R. Franckh, H. Reinbrun, L. Stambler, M. Steinberger, and T. Königsdorffer owe £88 4 1½. Roch lend Cristian Bodner £1 17 6.

July 16.—T. Königsdorffer, on Jan. 21, 1569, paid in Schwatz for travel to Augsburg, 15/-; making a box, 1/6½. Men's families (as before), £6 12 9; and to Franz Seldorffer and Petter Oberstainer, £12 1 3. July 24.—Jorg Schwaiger returning from Keswick, £37.

Aug. 26.—Hans Loner travelling to England, £18 15 0.

This last entry marks the arrival of the agent who came to live in London; he had been in England before,

* In 1565-67 and in 1568-71, Sir Henry, father of Sir Philip Sidney, was Lord Deputy of Ireland, and I suppose it is he that is meant, in spite of the Christian name William. But Sir William Fitzwilliam was also Lord Deputy in 1567-68 and in 1571-75.

The first of these is the fact that the British Empire is a vast and varied one, covering a large part of the world. It is not a homogeneous entity, but a collection of many different peoples and cultures. This diversity is one of its strengths, but it also presents challenges. The second is the fact that the British Empire has been a source of both wealth and power for Britain. It has provided the British with a steady stream of raw materials and a market for its goods. This has helped to make Britain one of the most powerful nations in the world. The third is the fact that the British Empire has been a source of both pride and shame for Britain. It has been a source of pride because it has shown the British what they are capable of. It has been a source of shame because it has shown the British what they are capable of doing to other people.

The fourth is the fact that the British Empire has been a source of both inspiration and criticism for other nations. It has inspired other nations to try to emulate it, but it has also inspired other nations to try to overthrow it. The fifth is the fact that the British Empire has been a source of both hope and despair for the world. It has given the world a glimpse of what is possible, but it has also given the world a glimpse of what is possible in terms of cruelty and oppression. The sixth is the fact that the British Empire has been a source of both unity and division for the world. It has brought many different peoples together, but it has also brought many different peoples apart.

The seventh is the fact that the British Empire has been a source of both progress and stagnation for the world. It has brought many new ideas and technologies to the world, but it has also brought many old ideas and technologies back to the world.

The eighth is the fact that the British Empire has been a source of both life and death for the world. It has brought many new life to the world, but it has also brought many deaths to the world.

1/4	0	1	1/4
1/2	6	5	1/4
3/4	6	5	1/4
1	9	1	1/4
1 1/2	11	10	1/4

Dr. Loner. 24 - 9 600, 10, - 1/2
 und Dant's ge/agt.
 Hans Merer

Dr. Loner
 und Dant's ge/agt.
 Hans Merer
 Hans Merer

but he now appears as a resident. On May 25, 1570, Lionel Duckett asked the Queen, through Cecil, to appoint Mr. Richard Dudley and Mr. Dalston superintendents of the copper business (S.P.D.) ; I suppose that a German superintendent was needed by Haug & Co. to look after their interests. Loner left Augsburg with his young brother Caspar, Hans Mehrer (or Merer) the clerk, and Lienle or Lienhart Diringer, who had been engaged as carter for Keswick :—

By carrier (? on horseback) to Speyer ; thence to Oppenheim by wheeled conveyances (Rollwegen) ; by boat to Cöln ; by wheeled conveyance (Rollwagen) to Antwerp ; by covered carriages (Hüttich wegen) to Dönkirch (Dunkirk) ; ship to Dover, paying fare and trinkgeld ; horses to Grevesin (Gravesend) ; boat to London ; and including 3/- to porters for carrying their luggage to the inn, the journey cost £31 1 11³/₄.

From Sept. 22, Lienle was put up at the Berndanz (? Dancing Bear) at 1/- a day ; the others lodged with Mrs. Christian (later called Mrs. Christian Soffting or Safftinge), Hans Loner and Mehrer paying 2/2 a day and the boy 1/2. Their first expense was pen and ink 9d. From Sept. 26, fortnightly messengers were sent to Keswick, Robin Fletscher and Hary Gibson alternately, at 10/- each time.

Oct. 9, Petter Türrg (or Sturg), brewer, sent to Keswick, 10/-.

Oct. 10, with Robin, Loner sent to Keswick a leaden inkstand, 3/6. Oct. 16, his washing, 5/- ; wax and thread, 3/- ; Zedoary* for malaria, 1/- . Oct. 23, gave Setzenstollen, smith, 10/- ; 6 leather bags to send things to Augsburg, 1/3 ; 2 books for drapery accounts, 10d. ; blotting sand and caster, 1/2. Oct. 26, English writer for 2 letters to Mr. Secretary (Cecil), 2/4.

Nov. 8, torches (links on dark evenings) and ink, 10d. ; pen-knife and small sundries for writing, 4/2 ; 2 casks to send ore to Augsburg, with nails and packing, 3/8 ; 2 tin bottles and 2 pints of oil† sent to Keswick as a sample, 2/3. The post for

* "Zwitwe," i.e., Zittwer, a drug which Dr. Meilinger says (in his work already quoted, p. 91) was supplied by Haug & Co.

† Probably train-oil, for soon afterwards it was used in the mines. The whale-fishery was only just beginning. According to Hakluyt, an English merchant was enquiring in 1575 about methods of taking whales, and it was not until 1593 that English ships were sent out for that purpose. But some Biscayans were about this time taking whales off Newfoundland, and a number of English ships were fishing off Iceland.

16 ounces of letters from Antwerp at 5d. Sending two heavy letters and a sample (Handstein) to Antwerp, 10/-. Two canes of cinnamon sent to D. Höchstetter 3/6, and a Venice glass 4d., also 4 calendars 8d.; and various writing materials sent to Keswick. Nov. 10, Jörg Bachmair, Franz Dorn, Thomas Häckel, Thomas Stâr, miners, Sebastian Göpler, carpenter, and Cunrad Baumaister, smith, sent to Keswick, £4 1 0. William Webb for St. Sebastian iron, "Sibletd" (? mistranscribed by the clerk for "Sivlisch," from *Seville*, as elsewhere) and English iron, also 19 gallons 1 pint "whale oil instead of tallow to burn in the mines" at 18d. a gallon, sent to Keswick by Stable, £12 9 10.

Dec. 31, sent to Keswick 4 broad English bedcovers at 7/-, 4 small coverlets at 4/6, and 4 Netherlandish coverlets at 6/-.

The summary of expenses for 1570 shows:—

March 31.—Shrovetide and Easter accounts	..	£1115	16	7
May 15.—Whitsuntide	.. ..	717	16	11½
July 24.—St. James' day	.. ..	995	15	3½
Sept. 10.—Holy Cross day	.. ..	927	6	7½
Nov. 6.—All Saints'	.. ..	434	15	6½
Dec. 31.—Christmas	.. ..	1451	8	1¾
Add Sept. 12 at Antwerp, J. Schwaiger and H. Altschmer	.. ..		4	5 1
		<hr/>		
		£5647	4	2¾
		<hr/>		

The total liabilities of Haug & Co., including debts from shareholders who had not paid up,* seem now to stand at £15,750 1 6½. These great expenses, and the very slow returns, had alarmed the Augsburg firm. In the letter alluded to at p. 13, Hans Langnauer, writing

* This view, taken from the German accounts, tallies with that derived by Mr. W. R. Scott (*Op. Cit.*, p. 531) from English sources. He says:—"It is recorded that the English partners, after six years trial (*i.e.*, at the end of 1569), seeing no hope of profit stayed their hands from further disbursements, and in a petition by some of the shareholders against the management of Höchstetter, complaint is made of the 'many contributions so grievous and inexpectate,' while out of the great 'riches' of the mines, treasure had been received by Höchstetter 'and by none else.' There is no doubt," Mr. Scott continues, and we see from these Accounts that he is right, "that very considerable quantities of copper had been won, but the difficulty was to obtain a market for it. . . . The difficulty of finding a market was accentuated in 1571 owing to the depression of trade in England during that year."

from Speyr, September 22, 1570 (a month after Loner had left for England) says:—

Honourable dear Hans Loner, with friendly greeting etc. I asked Ilsung the Governor . . . but there is no money to be had in Augsburg or Frankfurt. The Governor tells me he hears from Augsburg that our business in England is in a very bad way, and some one has warned him against letting us have money. He replied that the information was untrue, and that he knew our affairs were prospering. I mention this to you to show what loss and worry this English business is bringing me; if you cannot persuade the Queen to help us with a substantial sum we must be ruined. No money is to be had, and yet we must put down 40,000 florins by the end of the year! I asked the Governor to tell me who had made this statement to him, but he would not. His cousin, however, wrote to him from Augsburg. I fear there are God-forsaken mouths in Antwerp too, that laugh at me, and all my credit will be gone. I beseech you, therefore, explain our distress to the Queen, and Mr. Secretary, and the Earl of Leicester, and beg them to justify the confidence with which we ventured into this Labyrinth with our own and other people's money. We hope she will show a Christian spirit, and not desert us in our need. Believe me, I don't know what to do: and I want to tell you this so that you may know the position and act with energy. Let Keswick be Keswick, and do something for us, even if you have to show the Queen this letter in German or translated. If that is useless, when I can get away from home without increasing suspicion, I will do it myself, if it cost me my life. For just think how it is with me—I can't complain to any friend, or I should have to publish the details of all my affairs, and nobody who has not been in the business with me can believe—ach Got!—how frightened I am. I would rather be dead than lose credit like this. All this comes from the confidence we have placed in Höchstetter and you. God Almighty grant that the worst may not happen, and dispose the Queen to open her heart, for she is able to help us out of the difficulty. If only she would keep the money and the copper together, and set us free from further responsibility!

Datum ut supra, HANS LANGNAUER.

The Queen, it may be said in advance, did give some help, though not to the extent suggested by Loner in his

letter to Cecil of October 27 (S.P.D.)—a letter evidently prompted by this from Langnauer. He asked that instead of three or four thousand cwt. of copper, three or four hundred thousand should be ordered of the Company by the Queen. There was evidently some difficulty in disposing of their stock, as appears later; but, meanwhile, a valuation was made of the copper, lead, ore, charcoal, stonecoal, wood, etc., the buildings, furniture, tools and plant at Keswick and the mines. It is dated January 1, 1571, and endorsed "received in Augsburg, June 20." One hopes that poor Langnauer heard before then that his assets, apart from money owing, pretty nearly balanced his liabilities, for the valuers made out a total of £15,229 5s. 4½d.

The summary for the year shows that they were working the following copper mines :—God's Gift with St. Peter, Kupferplatten (the Copperplate), Caldbeck, Grasmere, Borrowdale (at a different site from the Copperplate) and Buttermere. The total output was 12,026 cwt. 106 lb. of massy and shaly copper ore, reckoned to give 928 cwt. 27 lb. of copper, valued at £2784 14s. 5½d. From the lead-mines at Caldbeck, Grasmere and St. Joseph they had got £79 19s. 8d. worth of lead. The Smelthouses summary gives 1261 cwt. 28 lb. of copper as actually turned out (much ore, of course, being in hand at the beginning of the year), and a table of expenses—charcoal, peat, stonecoal, lime, wages, etc., and carriage—shows that the cost of smelting was 2/1½ a hundred-weight. They were still buying lead ore from Alston to smelt at Keswick, for the best lead veins at God's Gift (Goldscope) had not yet been discovered.

A list of draperies in hand at the close of 1570 gives us an idea of the possibilities of shopping at Keswick in the days of Queen Bess :—

961½ ells Osnabrück linen; 30½ ells London cloth; 55 pieces 2½ ells fustian; 1½ ells "Carise" (? crash); 24½ ells linen with

woven patterns "for waistcoats" or doublets; 3 skins Cordovan leather; 1 ell velvet; $1\frac{7}{8}$ ell satin; 24 ells "Schamlott" (? camlet); 5 pieces 13 ells fustian, cloth of Arras* and "Macheier"; 9 pieces $7\frac{1}{2}$ ells cotton-backed silk twill (halb seidener Zwilch); $92\frac{1}{2}$ ells taffeta; 3 felt capes; $153\frac{1}{4}$ ells frieze and lining; 110 ells sackcloth and canvas; 3 lb. quilting and sewing-silks.

One more letter entered in the Calendar of State Papers may be noticed, to close the year. In December, Daniel (Hechstetter ?) wrote asking Cecil to help Loner in his management of the business, and recommending that the quantities of copper received by Mr. Dudley on behalf of the Queen should be fully known. He complained further that the Company suffered by the restraints on foreign trade—a remark which we shall find illustrated in the course of the Accounts. .

* This does not mean tapestry, which, being also made at Arras, took the name exclusively in common English use. But at this time a plain woollen cloth was made there, and appears in other accounts of Haug & Co.'s drapery business (see Dr. Meilinger, *op. cit.*, p. 39).

THE ISLAND AND DALES-FOLK IN 1571.

AT Smelthouses on January 1st, 1571, Thomas Wallner was foreman and coppermaster at 13/6 a week; Georg Staudacher, "Kupffereinlasser," at 9/-, and the following also received 9/-: Barthme Bürnberger, Ulrich Stampffer, Jörg Teufferer, Sebastian Zeisacher, Ruprecht Schrottenberger, Jörg Reichel, Bernhart Fechtenbach, and Hans Regawer. Hari Schiffer (? Shepherd) earned 8/-, and some got overtime and extras. In September, Regaucer's place was taken by Hans Altschmer, and two new men came on the scene, Hans Höss at 5/- and Gregori Grasndorffer at 4/6. Robert Banke, who was still the crusher or pulveriser, was hurt in his employment in or about May; on June 4th Israel Waltz was paid 6/8 for surgical attendance on him, but he goes on taking his wages at 5/4 a week for some time, until he appears as caretaking and merely assisting at the crushing-mill. The other English assistants at the beginning of the year are Wm. Athow, Nicholas Williamson the watchman, John Bunting, smelter, Peter Bantle (= Bautbe?), who supplies the 8 furnaces with peat, and a number of stokers and stonebreakers under Christopher Mayson and Miles Athow. Breaking up stonecoal occupied Wm. Gaitskart at 3/- a week and 7 small boys at 3d. a day in February. Wm. Gaskel in March, and in July John Debison, John Wager (? Walker), John Bunting and Fechtenbach's son were so employed. In September, beside crusher and caretaker, there are the peat and lime weigher, the man who looks after the peat, six smelters' assistants at 6d. a day, and various stokers and shovellers at 6d. and 5d. The weekly wages to Englishmen run to four

or five pounds. Some of the entries for other work done may be taken as samples:—

Jan. 1. Jan Lamert (Lambert), cooper, 7/9.

Feb. 12. Thomas Bulfeldt, topping 200 oaks and splitting firewood, 10/-. Feb. 26. "Three score that is 60 stones" for the furnace, 9d.; 21 score stones for "furwendt" (p. 68) 4/9; 18 score eye and knee stones (Aug und Knüestain), 3/7, with carriage by water from the (Borrowdale) quarry to Medingstett. Jan Dieckhson and others bringing ore over the ice from the Vorwald (Copperheap bay) to Midingstet, £4.

June 4. W. and R. Stupp for carrying 1½ hundred stones from the Borrowdale quarries by water to Medingstett for the furnaces, and Haw Hari and Robert Gest for taking them from the quarries to the waterside, £1 10 10. 4 pair gloves for coppering, 6d. (Another entry mentions 6 ells twill for making gloves for coppering, 2/4.)

In the Whitsuntide term were used for smelting 138 loads stonecoal at 8d., 455 loads charcoal at 2/4, 6210 loads peat at 4d., and 605 loads lime at 2d.

In July again Robert Göst (? Guest) carries 360 "furwandt stain" and 360 "ofen stuckh" (stones for furnace) from the quarry to the lake 18/-, and 560 "knie und augstain" 7/5; and building at Smelthouses in St. James' day term comes to £19 11 5.

Aug. 13. Stupp, for carrying by water, Brandelaw to Midingstett, 15½ fathoms of wood 5/- and 9 boatloads from the Vorbarckh (Fawepark) 3/-. Stone for the furnaces, 300 big pieces 4/6, 700 middle-sized pieces 9/4, 100 small pieces 1/-; 2 men dragging stone from quarry to water 1/3. Cooper for 9 water kibbles 2/8. 5 boatloads of logs (Schaitten) 3/4.

In Holy Cross term, smelting used 611½ loads of charcoal, 215 of stonecoal, 7515 of peat and 651½ of lime; and at the end of the year similar entries of stone for building up the furnaces continue—Steffan Puser and party getting stone 13/6; Heue Hari getting stone for furnace 18/8; Stup boating it over the lake 8/6; also 74 fathoms of firewood from Barras £1 4 0, and 22½ boatloads firewood 8/2. John Buldfeldt, sheepskin for bellows 12/-.

The *Building* entries show the Scotts as still employed in making cartwheels and doing various carpenters' work at Smelthouses, and Robert Girbei (Kirkby) mending

1918-1919. The following table shows the results of the investigation.

TABLE I.—RESULTS OF THE INVESTIGATION. The following table shows the results of the investigation. The first column shows the number of cases, the second column shows the number of deaths, and the third column shows the number of recoveries.

TABLE II.—RESULTS OF THE INVESTIGATION. The following table shows the results of the investigation. The first column shows the number of cases, the second column shows the number of deaths, and the third column shows the number of recoveries.

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TABLE VI.—RESULTS OF THE INVESTIGATION. The following table shows the results of the investigation. The first column shows the number of cases, the second column shows the number of deaths, and the third column shows the number of recoveries.

roofs there; February 3rd, Gawin and Thomas Harie, carrying wood from Borrowdale to Midingstett over the ice; on February 26th we find 4 days' work at 8d. for hewing out a wine-cellar; March 22nd, "a plumber named Oswald Meires" (Myres) for melting 124 stone of lead for roofing at the Smelthouses, £1 os. 8d.; June 4th, 2 iron bars for the office window; November 3rd, herbage to plug the weir and thatch, 1/8; cutting "farmen" (? Formen, ? frames) for use by roofer at Smelthouses, at the Schlich hof (I suppose, a storeplace for ore) in Fawe park, and at a wine-cellar, £1 17s. 5½d. Old Atgeson (Atkinson), carpenter, making and mending in the master's house, 5/6. Buckbarr leading 1000 slates from Under-Scido to Smelthouses, 10/-. The building at Smelthouses was, however, completed; and there is more interest in the new works on Vicar's Island, of which I collect the entries:—

Jan. 16, Brewhouse; boards from Barras and birches from Brandelaw to Vicar's Island; stone from Barratal (Borrowdale), and timber for the windmill, etc., £1 7 8. Feb. 26, James Attkinson, carpenter, and 2 men at the Island, John Greve helping to dig out behind the brewhouse, etc., £6 7 0½; John Harison of Graistockh, bringing a millstone from Pireth (Penrith) to the windmill £1. Cristoff Thwait, bringing manure from Miladi's stables to put on the garden on the Island 26/- on account; and for taking 300 apple and pear trees to the Island £4. John Dryver and Wm. Westeral for making a dyke and hedge round the garden £1 10 0. March 31, roof to beer-cellar and drying-floor for corn, James Atkinson £1, and other workmen £2 17 6, 13/8½ and 11/-. Plumber for making 20 ells lead pipe ¾ and 10 lb. solder 4/-. his man 6/-. James Sandes, hooper, making 18 beer pots for the mines 9/- and 12 dozen hoops 4/-; also lime and making sails to the windmill.—£12 13 9. April 16,* Christoffer Thwaite bringing manure over the ice to the Island £1 0 8, and for digging a ditch round the garden £1 6 8. June 4, Robert Mur, waller, building two houses, one to keep the beer in, with a corn floor

* This does not mean that the work was done on that date, but that it was then paid for. Even in a severe winter the lake would hardly be frozen over—"to bear"—so late in the season.

(? malt floor) and a pigeon house £18 15 0, and workmen £1 12 6 and 10/-; riddling sand 7/6; digging the foundations 4/4; herbage for thatching 1/-; James Etgeson (Atkinson), carpenter, £3 9 6; Adam Studart, getting 2200 slates 13/2; John Buckbarr carrying 3200 slates from Under Seido to Island £1 12 0; plumber mending great brewing kettle, etc., 6/8; tailor for making sails to windmill 4/4; cutting a millstone 11/4; lime £2 6 0 and carriage from kiln to Island £4 5 4; Robert Girbe (Kirkby) roofing the two houses with slate £1 15 0; workmen making up the hedge round the garden with stones £4 12 8; Lamert the cooper making 13 beer barrels 9/9, etc.—£43 4 11. June 12, 12 rings for the swine on the Island 10d. July 16, Mr. Bailey (Radcliffe's) 2 servants, 5 days' work at the Island 6/-. Sept. 15, iron grate for brewhouse, 234 lb. iron at 2½d. and 400 nails. Nov. 3, dry-stone fence on Vicar's Island, etc., 9/7. Richard Wil-on, our miller, 1 year's wages £3, and on baptism of his child* 3/-. Bread and meal from the mill on the Island to the master's house in All Saints' term £3 8 7. Dec. 8, W. Zifferj (Jeffery) bringing stakes from Fawe park to "Eil" (Isle); finishing garden and pigstye, J. Scott and men, etc., £7 6 5½.

All this shows that in 1571 a windmill, brewery, pigstyes, pigeon-house, and garden were made on the Island; but, contrary to the general belief, the place was not used as a retreat for miners to protect them from the Keswick populace. In 1653 these buildings had fallen into decay, and a deed in possession of Mr. R. D. Marshall of Castlerigg, recording the sale of Castlerigg and Derwentwater Manor by the Radcliffes, mentions "all that parcell of pasture ground called Vickar Isle with a little ruinous house upon it."

The *Smithy* accounts for January name Wolff Hund and Petter Kolsseisen at 10/- a week, Andere Ringseisen at 9/-; and three English smiths, Dieckh Waterson and Parseval Athawe at 8d. a shift and John Japson at 6d. In April Robert Dawson at 6d. was added. As a sample of expenses in carriage of iron:—

* Gregory, baptized September 30, 1571 (Crosthwaite Register).

July 30, 1 ton iron Newcastle to Barnacastel 11/-, boy bringing a letter advising us of its despatch 1/4, Barnard Castle to Pireth (Penrith) 14/4, toll in 2 places rod., unlading at Newcastle and putting on cart 1/6.—£1 9 0.

The locksmith, Hans Dempff,* was kept busy :—

March 31, his board at 2/- a week, also for 2 Bülprött (? drawing boards) in the office, with a Zinter (? centre) screwed on, 4/8; 2 great locks and a lamp mended 3/4; an iron ring, 6d.; a padlock, 7d.; mending big dog's collar, etc., 1/4; also for the Brewhouse, 2 locks for the cellar, 1/8; a key and brass tap mended, 6d.; for Newlands, iron ring and "Stempel" (? staple) for a sieve 6d.; mending 2 padlocks and keys for H. Häring, 4d.; cutting 2 iron files, 4d.; 5 lamps to burn (train) oil at 2/-; for Caldbeck, 9 oil lamps at 2/- and mending one, 2d.; for Horses account, key to the stable and mending a bit, 5d.; for Smelthouses, a horn lantern 3/6. May 22, lock to Steinberger's room 2/- and key 6d.; with other locks, an English lock and 2 keys, etc. Sept. 15, locking 2 dogs' collars 4d.; 7 new oil lamps for Smelthouses, 14/-; 2 candlesticks in kitchen, 1/-; 2 lanterns, 6d.; staple on cellar door, 3d.; tongs for office, 4d.; etc. Dec. 31, three iron rings for the hand-rope on the steps to the office, 8d.; glass lantern, 2/-; tongs and pincers, 7d.; lamp for office and mending lock, 1/4; 3 candlesticks in office, 1/3; 3 keys and a door-lock for office, 11d., etc.

At NEWLANDS, Hans Häring is still foreman at *God's Gift*, taking 10/- a week, with Hans Krumpühler, Hans Operer, Hans Dierickh and Cristian Bodner in January on time work; next term, Häring and Lienhart Prugger; at Whitsuntide, Häring is alone with Berger to act as clerk, and Jems Bue and Jan Narman (Norman) as sorters; in November Joan (John) Milha is sorting, and in December the men on wages are Häring, Jorg Marttin, Benedict Effendler, Martin Berger. The tribu-

* He married Mary Purisyng 1570, and bapt. Christopher 1572 (d. 1578), Fronica 1575, Radigunt and Janet 1576-7, Judeth 1578-9; Janet "dau. of John Temph pooreman and Margaret (? Mary) his wife," 1580, and Richard 1581 (who mar. Janet — and bapt. Elin 1606; John and Agnes 1609-10, of whom John died infant; and Marv 1611). A (younger?) Hans mar. Frances Fisher of Keswick 1599, and bapt. Jaynn 1600, and Thomazin 1603; Frances died 1604.

ters at *God's Gift* in January are C. Klockher, N. Schram, J. Silbereisen, C. Böckh, G. Högler, S. Kalcher, A. Reindel and M. Carius, with J. Haggrie and J. Hutson as sorters, and John Bwe, English foreman, Dieckh Walckher and Cristoff Wurden, Gores (George) and Niclas Vischer (Fisher). At Easter the same men were working there, with E. Weitgassner, though in different groups; at Whitsuntide, Paindtner is added. At Christmas, the men working on contract in the shaft at *God's Gift* are H. Moser, Unterweger, and Colmanstetter; as tributers, F. Wallner, Matzler, Operer, Türeckh (Dierick), Beckh, Högler, Silbereisen, Berger and Reindl, with Edi Alason and James Bue sorting. At the *Franckenstein* in January are T. Häckhel and Jörg von Siber, Hans Paintner and Lienhart Prügger, in two couples; their sorters are Haggrie and Hutson, and labourers Thomas Bonner and Christoff Fascheit. At Easter the same, with T. Flettscher instead of Fascheit; at Whitsuntide Türeckh and Operer are at the *Franckhenstein*, with J. Tiffing and Christopher Wurden as labourers; in September, Thomas Häckl and Jörg von Siber take this working, and at Christmas, beside the last pair, we find B. Moser, Wolff Pintter (Binder) and J. Heisel, Ulrich Schlegel and Jacob Hofer. At a working called *High St. Daniel*, Dierickh and Operer, with Thomas Fletscher and Joan Dieffing (John Tiffen) were employed in January, but this seems to have been dropped later. At *St. Lienhart Hellensteiner*, with J. Vischer (Fisher) and Joan Hüerdtd (John Hurd), in February; Hellensteiner and Eisel in June; in November and December, Symon Buechberger was working there on a claim of his own for part of his time, while Hellensteiner and Eisel were still at their job, and Carius and Weitgassner had another. *St. Peter*; January, Berger and Weitgassner; Easter and through the summer, Berger alone, followed by Kalcher at Christmas; Adam Baurngaith (Burngate) was "ertz

auffgeber" (? giving out ore) here. The *Copper Plate* (Kupffer Platten; Ellers) was worked by W. Hochholzer as foreman, Underweger, Dorn,* Jacob Hofer and Jorg Bachmair, in one group, W. Binder and J. Heisel in a second, and U. Schlegel, H. Moser, S. Buechberger and J. Colmanstetter in a third, from January onwards till we come to the later part of the year, when it is no longer mentioned, but the *Hamlin* takes its place, worked by Schopf and Wurzer.

On June 4 there is an entry of drinks to 8 hewers at God's Gift on finding a good vein, 5/-, but this does not seem to have opened out a fresh working with a new name.

At the *Newlands Stamp*, Steffan Murr was foreman-washer with 8/- a week throughout the year. His English assistants were Tobi Ritzartson, Heuge Penson, Joan Vischer, Willum Walekher, Tobi Boue, Thomas Crossat and Tobi Hutson at different times. The expenses of the mine for Shrovetide term were £165 3 4³/₄, rising to over £180 in the next two terms, falling to £170 3 2 in July, £149 9 6¹/₂ in September, going up to £203 16 6 in November, and dropping back to £176 at Christmas. The *Newlands Stamp* cost on the average a little over £9 a term.

At *Caldbeck*, Benedict Effendler was foreman, with 10/- a week until November, when W. Hochholzer took his place. Men named as working there at one time or other are Steffan Nuspaumer, doing clerk-work (like Martin Berger at Newlands; *i.e.*, writing the men's tickets and receipts—"Zettel," which Nuspaumer also did during part of the year at Grasmere) as well as hewing; Sebastian Göpler, carpenter, Hans Regauer, Hans Krum-pacher, Jorg Heisel, Peter Lindsperger, Wolff Binder, Hans Matzler, Felix Wallner, Andre Torer, Philip Mair,†

* Franz Dorn married Agnes Harry 1570 at Crosthwaite.

† Philip Mair, who becomes in the Crosthwaite Register "Lippmawer" (Lipp being the German shortening for Philip), married Janet Borraddell, and baptized William 1570, John 1573, Fabian 1574.

Thomas Eisel, Martin Ernwallner, Thomas Schopff, Hans Hellensteiner, Caspar Fanginger, Matheus Scheuber, Jorg Kessler, Hans Mair, Balthasar Moser, Hans Krumpühler, Paulus Steer,* Lienhart Prugger, Caspar Klockher, N. Schram. It will be seen that men were freely shifted about; few remained at the same workings for many months together. The sorters at Caldbeck were Martin and Adam Bourngaïtt, Joan Barndel (John Borrowdale), Cristoff Birckhet, Edi Watson, all English, and in September Jacob Wiser. English labourers at 7d. to 4d. a day, Martin Baurngait, Scheils (Giles) Watson, Christoff Birckhet, Joan Barndel, Edi Egelsfelde, James, Willum and Joan Ficing, Petter Schmitt, Thomas Bawman, Willum Harison, Willum Mor, Jame Clarieckh (Clark), Joan Parber (John Barber), Thomas Yandel (Youdal), Joann Dann, Wm. Man, Thomas Wilson, Jan Alkorn, Thomas Schawe, R. Gerbi, Bernhart Schmidt, Anthoni Hundt, Joan Huttson, Lienhart Wilckhison, Thomas Flettscher, Willium Warumb (? Warham), Willium Harison, Goriug (George) Mango (or Mungo), Hairi Penson, Willium Studart, Joan Witt. English carpenters (putting up buildings from Easter through the spring), Joan Crassatt (Crosthwaite), Hugo Stanger, Rizart Harbj, Joan Vüscher (John Fisher), Goriug Boule (George Bull), Pernhart Schmidt, Niclas Scott, Dickli Huttson, Bernhart Stüll (Steel), Oswald and Rüzart Huttson (Richard Hudson, not the same with Dickie H.), Simon "Gstett" (? Crosthwaite), T. Harrison and T. Prisca (Briscoe) were also employed in carrying. The caretaker of the mine was Elen, Ellena, or later Nele (Nelly) Joudel (Youdel), who, some years later, appears as Nele Schmidt, perhaps having married Petter Schmitt (Smith) who worked at Caldbeck for some years.

The workings at Caldbeck this year were the *Emanuel*

* "Powles Staerder," for Stär or Stärdt, other forms of this name, married 1573, Katheren Bewlye, servant at Keswick.

and the *Reutterin* (Rider), and the average expenses of the term about £92. There are various entries of writing materials, wooden platters, sheets, kettle, pan, sackcloth and canvas, buckets and mine implements, showing that the men's lodgings were being furnished and the mines were being extended.

At *Grasmere* the year begins with the wages of Edward Watson, caretaker for 7 weeks at 2/6, and carriage of tools to the place 2/8; then, in February, Martin Ernwallner and his wife go there as ore-washers, £2 16 0 for the term, and Edi Watson as their assistant, £1 10 0. Nussbaumer comes for a while to do the writing, and Rowland Walker has many jobs of carrying iron, etc. Expenses rise to £5 10 0 in July term, drop to £4 9 1 for Holy Cross day, and for the winter the work seems to be abandoned again.

Martin Kiendler is still "Einfarer" at 25/-, and Hans Reitter, mine manager, at 20/-.

The work of Hans Reinbrun, as manager of the carrying department, was increasing very considerably. He had to arrange with local farmers and others to lead peat, charcoal, coal, lime, etc., and this was now employing men and women over a large area. The shortest way of expressing the scale of his operations will be to group together the names of the carriers, many of which (especially in his accounts of loans in advance for work to be done) have the places of abode attached to them. In any case, the work on which the carriers were engaged suggests the district in which they lived. (I turn the Christian names into ordinary English) :—

Peat carriers (chiefly from Skiddaw and Flaska).—Hugh Alanson of Torntwaith (Thornthwaite), John Banckh of Castrigg, Edward and John Braunrickh (Brownrigg), Gawen Burckhet (Birkett), Thomas Cannon (see Penrith Register, 1577), John and William Fisher (Vischer) of Torntwaith, John Gaitskart of Cristal (Mungrisdal), Arthur Greves (Graves), James Greves, John senior, John junior and Richard Greves of the Bownes

(Burns), Robert Greve of Milbeckh, Gawin Greve of Smaithwaith, Gawin Greve of Skauthowe, Robert Greves of Shonderhowe, John Greves of Castrigg, Edward Gristal (Grisdale), Robert Hodgson above Greta, Robert Hodgson of Trelekhet (Threlkeld), William Hodgson of Torntwaith, John Hodgson, Richard and Robert Hudson of Trelkhet, Thomas Lancaster, Christopher Lancaster of Walcktwaiht, Gawen and Christopher Mosse, Christopher Mayson, Christopher Richardson of Burekhedmyr, John Scot of Trelekhet, John Scot of Riding, Richard and Matthew Scott, William Straye of Pireth (Penrith Reg., 1562), Nicholas Steel, Christopher and John Todinder (Todhunter), Thomas Walckher of Torntwaith, Robert Watson of Fornseidt, John Wilkinson of Weastkoe, Christopher Wohrn of Lothwait, John Worn of Trelekhet, John Worn of Milbeckh, John Wohrn of Berckhead Banckh, Hugh Wood "at" Thorntwaith, Percival Wood of Keswick, William Westeral of Keswick, Robert Wrey, "Cristoff of Smaithwaite" and "Miles of Howe" (? Milles Howe, a charcoal carrier from Isel).

Stonecoal carriers (from Bolton).—Robert Arthou of Aspater (Aspatia), Richard Barnes, Gawin Bristowe of Crosthwaite, John Emadson (Edmondson), Edward Elleson, Thomas Harison carpenter at Bolton, John Hodgson of Gouswel, Gawen How of Castrigg, William Portner (Porter), Thomas Richartson of Broughton, Anthony Sambson, John Scitt, Annes Stampffer (Annas Stamper), John Thombson, Richard Walckher of Witrigge, John Wilson of Apeltwait, William Wilson, Edmund Worn.

Stone and slate carriers.—John Buckbarr (Keswick), Robert Gest and Hugh Hari (Borrowdale), John Harison of Graistockh, William Zifarie (Jeffery)—the last also a boatman.

Boatmen.—William and Robert Stop or Stup, Christopher Thwaite.

Lime Carriers.—Martin Gep or Kepp, Christopher Wallis of Warntwaith (Wanthwaite), Christopher Worn of the Chappel, Mabel Wilson, widow.

Wood carriers.—Miles Athaw, John Buckbarr, Gawen and Thomas Harie of Borrowdale, Mang (Mungo) Harison (Caldbeck).

Ore carriers (from Newlands and Caldbeck).—Mang Alkorn, Davitt Bael (Bell), John Boner, Margaret Clerckha, widow (of Newlands), John Dieckson, Hugh Vischer (Fisher) in Newlands, Miles Fisher of Torntwaith, John Fisher "of de Schnapes" (Snabs in Newland), Thomas Fisher of the Wolhauss, John and William Fisher Gilbanckh (always thus), Richard Nelson (Caldbeck), Richard Niclason (Caldbeck), George Scott "of the

Woodhal in Kalbeckh," Anthony Scot from Aspetro, Anthony Scott from Bassingthwaith, William Studart, Hugh Watson, "our copper carrier," John Wilson of the Espenes, Miles Wilson of Waitenlot (Watendlath).

This last list omits some who have been mentioned as carriers before; in subsequent lists only fresh names are noted.

Charcoal carriers from Isel park.—William Alkokhes (Alcocks), Thomas Banckh, William Barrowskal, Thomas Bäreckher (? Parker), Christopher Bawe (Isel park), John Beckh, John Bretwaith "the son of Perseval," John and Isabel Bradthwaith, John Bretwait "the son of Mylles," Oliver Brigge, John and Richard Bristowe, Gawen Bue (? Bull), Richard Burekhet, Richard Buttermair, Simon Cutbart (Isel), John and Anthony Couckhe (Cook), Anthony Cruckh, Anthony Cruckdackh, John Cuoper, Miles Damson (?), Miles Deneson, John Dawson of Setmabange or Hiattmabainie (Setmabanning), William Dabson (Dobson), Dickh Doffer (Dover), John Elles of Armathwaith, Sander Fisher, Richard Fisher, Andrew and Anthony Fisher, Gawen Fisher, John Fisher waller, Nicholas Forneis (Furness), Robert Greve of the Beackhause (Beckhouse), Robert Hodgson of Nadel, Gawin Hodgson of Milbeckh, John Howe, Robert Jackson, William Jackson of Isel, William Lawson, Thomas Mackherel, Nicholas Marshall, Christopher Niclison, Thomas Porter, Symon Ritzartson, John Raderi, John Richartson, James Rawen (Raven), John Scot of Coalbeckh, John and Roland Scott of the Bridge, William Scott of Breckhowrigge, Nicholas Scott, Hugh Standle (Stanley), Thomas Taillour, Richard Wainwrigth, Percival and Dieckh Walckher, Henry Wilson of Cadbeckh, Thomas Wilson of Wantwait, Thomas Wilson (another), John Wilkinson of Isel, Peter Willemon, Christopher Wodt (Wood).

Carriers of ore and charcoal not in above lists.—Nicholas Castlhow (with R. Hodgson of Nadel), John Dockherai (Dockwray, from Wanthwaite), William Ellis and Edward Judal (Youdal), Christopher Falshode,* two John Gaitskarts, cousins, Robert Hodgson of Kausiefoot, Henry Hoggard and William Tourner, John Hudson and William Spenser, Christopher Lancaster of the Gardhowse, John Lancaster and John Wilton, John and Thomas Peel, Thomas Pickeringe (spelt Bickeringe), John Person

* Falshead, Fashead or Falset was a Penrith name at this time.

(? Parson) and John Stonger, John Walckthwait of Tornthwait, Gilbert Wartton, Christopher Walckher and John Stamper. (Those coupled together are partners.)

Charcoal from Borrowdale.—Richard Burtthait, John Fisher (Vüscher) of Barawthial, John Fisher the son of William F. in Borrowdale, John Fisher "the son Olivers of Barratal," John Fisher "of de Rigges," Thomas and Hugh Harie, Thomas Haines, Robert Jackson, Edward Raulinson, Henry Walckher, John Jaudel (Yondel).

Ore and charcoal from Grasmere.—Christopher Dauson of Gresmer, William Fisher of Emelseid (Ambleside), Rowland Walckher the elder of Gresmer.

Charcoal carriers from Furness (i.e., Hawkshead parish, Coniston, Langdale, etc.).—Richard Afel, Affel or Offel (Fell), L. Atkinson, Anthony Aston, Christopher Bancsh (later "of Coniston," i.e., Bank Ground), Bernard Benson, Brian ("Bren") Bensonn (Satterthwaite), Thomas Benson, Nicholas Benson, John Bretwaite of Sceltwaith (Skelwith), Miles Bertwait, John Betwait, Edward and Robert Bretwaite, John Brigge of Londail (Langdail), Thomas and William Dodgson, Edmund Dogson, John Fisher of Emelsod (Ambleside), Simon Grig, George and Thomas Grigg (Grigg), Edward, Leonard and Thomas Howmes (Holmes, ? of Holme Ground), Robert Jackson, Jenkin ("Jckhin"), John and Matthew Kneip (? Knipe Ground), William Lawson (? Lawson park), George Megarthe (? Maygarth), John Mealfel (Milful) of Logdon (Langdale), Hugh and Richard Parrockh (Park), "Georg Rigge of Claiff in the Barishe of Hocksed," George Rigge "of the Fildhed," Roland Tomson of Gristal (Grisedale), John Walckher, Roland Walckher of Tarnehowse (Tarn Hows, Monk Coniston), Roland Walckher of Langdail; also "Bren of Satertwaith" and "Cristoff of Satertwait," of whom Bren may be Brian Benson above.

The gentlemen from whose woods charcoal was made are mentioned:—Thomas Thurland and George Lamplugh, the Earl of Northumberland, "Milordt debito von Yrrlandt genant Willum Siedein," Thomas Folafieldt (Fallowfield), Lancelot Lancaster, Willum Fleming, Willum Buele (Bewley), and Christopher Sandes.

The "stonecoal" mine progressed in this year:—Shrovetide accounts note:—

the University of Chicago Press, 1962. Pp. 128. \$1.50. This is a small book, but it is a very good one. It is a book about the history of the University of Chicago Press, and it is written by a man who has been at the University of Chicago Press for a long time. The book is written in a very clear and concise style, and it is a very good read. It is a book that every student of the history of the University of Chicago Press should read.

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Dec. 9, 1570, 54 "scep" got at Bolton 13/6; pumps and pumping the mine, candles, carpenter, hazel rod for the bucket (handle), etc. Dec. 17, 50 "scep," 12/6, and Dec. 24, 52 "scep," 13/-, pumping 14/7; wood for shaft 5d.; wooden shovel 9d.; carpenters 8/-. Dec. 30, pumpers at 5d. a day 12/1; candles 4d.; two "wasser schuech" (water shoes?) 6d.; carpenters 8/-; and so on every week. Feb. 26, 1571, John Tombson sinking a shaft $7\frac{1}{2}$ fathoms in the Starmir* at Bolton at 10/- a week; and later $5\frac{1}{2}$ fathoms more. Driving an adit into the old shaft at the Starmir, $1\frac{1}{2}$ fathom deep, 7/6. Easter term expenses of the mine come to £99 3 10½. Whitsuntide expenses at Bolton and Siwenseckh (or Sibenseit) £75 17 11½. St. James' term, £55 6 0½ including 3 "water shoes" 9d., driving a level 5 fathoms at the Starmir £1 5 0. Paid to one who showed the new stone-coal 10/-, and when it is found, as he says, he is promised 20/-. Carrying 7 fother wood out of the house at West Starmir to the other house where the wood lies at Bolton 3/6. Carrying 973 "lodes" coal from Bolton to Smelthouses at 6d., £24 6 6, and 651½ "lodes" from Sibenseckh to Smelthouses at 7d., £19 0 0½. Later on:—"Nota. From Sibenseit 6½ 'lödes' or horseloads make 1 scep or 'sam'; from Bolton 51½ 'horsch lödes' make 1 scep or 'sam' (seam)."

A few extracts from Travelling, Housekeeping, etc., will complete a sufficient account of this year's history at Keswick:—

Rent.—Cuthbert Ratclieff, three rooms, cellar and stable, Sept. 15, 1568, to Dec. 31, 1570, £9 15 0. Hari Anderson, "our man in Newcastle," for a warehouse £1. Persoval Ratclieff, bailiff, for a weigh-house 10/-, hay loft 15/-, stable £1 6 8. Jeffrey Thambson, Penrith, cellar for storing lead, £1. J. Bulfeld for the house in which we live, at £1 a year.

"Our carter," Hans Wolsiter, wages at 3/- a week; and 2 English carters at 3/-. Feb. 5, bought from John Beck a cart-horse £2 10 0. Feb. 26, oats at 15d. to 18d. John Bulfield, saddler, for harness, 9/11. Ap. 16, H. Walsitter with 4 horses to Workington to fetch wine £1 10 0. May 16, H. Wolsiter with horses to Workington spent 1/6. June 4, two journeys with

* The Starmir and Sibenseckh suggest names like Starmire and Sievysike, but the Rev. J. Ewbank, rector of Bolton, tells me that he is unable to identify these places.

horses to Workington to fetch wine, say 4 days, £1 6 8 (*i.e.*, this sum is put down to *Housekeeping* from *Horses*). Nov. 3, Liendl Schmid our carter, wages 30 kreutzer a week; Hans Bescht, carter's man, at 24 kreutzers; he has been very honest and diligent, and at his request we raise him to the same wages as L. Schmidt. Two English carters still get 3/- a week each.

A curious episode can be put together from entries in Loner's London accounts and the Keswick Journal:—

Jan. 27 (Keswick), Hans Rändel or Tanfelder to London £2 10 0; lent him 13/6; John Greve bringing his horse back 9/-. Feb. 14 (Loner), Harry Gibson our messenger and Hans Randol riding to London 15/-; March 6, H. Randol's board in London £1 7 8; March 10, paid George Needham for translation of Randel's "process" from German into Italian 10/-, and given to the young man who served Randel in Spain, and came to London at our invitation £1. April 16 (Keswick), taken out of drapery stock for Hans Rändel a considerable time ago 16/1; paid Robert Battrich (Patrick), Scotsman, now going to Scotland to get news of Hans Rändl £1. Richard Ledes gave Hans Rändl for travelling to Worcester, above the 50/- that Mr. Höchstötter gave him, 10/-, also to him and H. Gibson going from Keswick to Worcester £1 16 8. March 25 (but entered after the last), Mi Lordt Hairi Scrops (the Lord Warden's) clerk for letters to Barwickh (Berwick) and other places to get news of H. Rändl 2/-.

The following are picked month by month from the Keswick (K.) and London (L.) account books:—

Jan. (K.)—On two occasions given "for Comedies or Plays," each time 3/-; soap 2/4; hair sieve for bolting meal 1/-; tailor for lads in the house 2/8; making clothes for 2 poor lads 1/-; bit for Höchstetter's horse 1/1; John Dryver taking letters twice to Mr. Edmond Torner the Duke's servant 1/2; John Greve to Carlhil and Fornes 3/6. (L.)—New Year's gifts at Mrs. Christian's house 14/-; Jan. 3, Robin Fletcher for bringing 2 fine specimens 10/-; 10 lb. tartar sent to Keswick at 8d.; 11 books great and small 16/-.

Feb. (K.)—Sebastian Gopler, carpenter, Jorg Bachmair,*

* Loner notes "sent to Keswick Oct. 10; no use, and sent back; the poor fellow can't repay; charge to general expenses, 6s."

Franz Dorn, Thomas Häckhel and Paul Stär, travelling between Keswick and London £3 15 0; Richart Lösch (Ledes), John Greve and H. Reinbrun to Carlhil to the Assizes and at Mr. John Tarstan's 8/11; (L.)—Feb. 7, Loner and 3 others to Court, 4½ days £2 4 10; horses thither 18/- and boat back 3/6. Feb. 21, D. Hechstetter's horse shod 1/8; keep of horse 41 days 35/-.

March (K.)—Bought from Lady C. Radcliffe the wood in Wiethmoss, Ranschome and Kidhomess £7 10 0. Reihel's and Kolmastetter's wives travelling Augsburg to England £5 17 6. March 22, D. Hechstetter left London for Keswick bringing £200. (L.)—Binding a book, 8d. Candles, green wax, assorted garden-seeds, etc., sent to Keswick, £1 1 4. March 6, sent to Keswick, 525 crucibles at 12d., and 30 muffles at 4d.; less 2/- deducted for breakages. March 29, 2 pair double and 1 pair single shoes at 18d. and 14d., and 1 pair slippers 20d. Maister Gerhard, tailor, £1 8 0. Bought for Gregory Weiss, 1½ skin Cordovan leather for a cape 15/-; making it, 4/-; a cap ("parott"), 3/8. A packing-needle, 6d. Binding 3 books, Journal, Debt book and "Kapusbuech," 2/-. Hans Regauer received in London £1, and to be paid him in Antwerp or Augsburg £6 is put to his account.

April (K.)—Israel Waltz, surgical attendance on Wm. Dauson hurt in the Caldbeck mine, 3/-. Shoes for boys in the house 2/6, making 4 pair sheets for the house 2/-. John Forest, carrier from Kendal, for 2 casks whale oil, 1 small barrel gunpowder,* etc., from London, £1 8 0. H. Regauer buys 1 pair woollen hose left by R. Franckh 5/-. Ap. 16, The Earl of Northumberland in 1568 sold us wood for £40 of which 90 loads of coal were made for Newlands Stamp and Smelthouses; but he gave us too much, and we place to his account £5 6 8. One basket "spraz" (? sprats!) bought in Newcastle cost 11/9. Bottle and 2 glasses, 1/-. Carriage of 2 baskets of pot beer-mugs 1/8.

(L.)—Ap. 5, Jorg Wiser and two women [Mrs. Reichel and Mrs. Colmanstetter] travelling to Keswick with Stable £2 10 0. For G. Weiss, 7 yds. program for doublet and hose at 4/4. For H. Reitter 3½ yds. linen with woven pattern at 18d. Hans Merer going to Keswick £5, and grey horse, saddlery, etc., for him £4 0 5. Old Nicholas Birkkhet going home to Keswick, partly for his services and partly as a gift 10/-. Ap. 10, 3 yards satin "melord purli secretario" (for Lord Burghley's secretary†) 30/6.

* Not to use in the mines, but for guns. The small quantity shows this, even if we did not know that gunpowder was not yet used for blasting.

† Perhaps on the occasion of Cecil's promotion to the peerage.

Ap. 21, Loner's tailor, maister Paulus, £2. Ap. 26, maister Randel Cain's (elsewhere Camm) man for (whale) oil £32 10 o. Paid for D. Hechstetter's boots 2/-. Going to Court £1 6 2.

May (K.)—One tun red wine from Corwen at Workington £11 10 o. 21 gallons vinegar, casks, and carriage from Newcastle £1. English calendar and sundries 1/10. (L.)—Tin wash-hand basin for Loner in London 2/6. 3 tons 10 cwt. 18 lb. Spanish iron £36 5 4. May 23, paid a woman 2 days to mend and hang out D. Ulstatt's clothes 1/-, and gave Mr. Robert Pittter 3 yds. satin and his servant 5/- on getting the warrant for £2000*; glass inkpot 5d.

June (K.)—D. Hechstetter, L. Stambler, H. Walsiter and J. Greve in London £4 18 o. Lienhart Prugger, miner, on the baptism of his child 2/6. J. Buckbar, 2½ bushel hempseed sown on the master's ground 6/2. Play-actors twice when company was here, 2/-. A poor scholar from London 6d. Our cook-maid and the 2 boys in the kitchen when D. Hechstetter left 4/6. Tailor mending boys' clothes, etc., 1/2. Mester Dauson's boy bringing us a present of 8 pair of pigeons 6d. (L.)—For H. Wolsitter black cloth cloak 17/6, jerkin 8/-, pair boots 6/6, hat 4/8, belt for his rapier 1/-. Men going to Keswick, H. Altschmer and wife, £1 16 8; R. Würzer 15/-; and for a gun £1 13 o; to the servant, "drinckgelt" for shooting it off twice, 2d. Thomas Duke of Norfolk received June 18 in London £800, and paid in instalments at Keswick. (K.)—William Fleming (Rydal) for 2000 loads charcoal £40.

July (K.)—Thomas Archer and Anthony Hutson for lead ore, 69 cwt. 20 lb. delivered Oct. 21, 1570, to June 12, 1571, £13 16 9. Lady C. Ratlieff for wood £5 8 o. John Bulfieldt for a pig that our dog worried some time ago 5/-. 1¾ ells cloth for a coat for Heuge Wattson our copper carrier that he should be more diligent thereby, 15/-. Wilson, cloth for kitchen lads' clothes £1 6 o; thread 4d. Hire of horse to ride to Carlin (Carlisle) to buy various things 1/-. H. Andreson for 10 tuns white wine,† freight from London to Newcastle £2; putting into cellar 5/-, unloading from ship, and boat to wharf 3/-. (L.)—July 16. Boat to Gravesend with D. Hechstetter and others 8/-; the night at Gravesend £1 10 10; boat back to London 3/-. Secretary of Spanish

* The Queen's loan, in answer to the petition suggested by H. Langnauer's letter, p. 97. On March 24 the Company of Mines Royal had written to Leicester and Burghley begging that the bargain for copper be completed, and that a warrant be given them for the discharge of the imposts on wine (for which see below).

† Bought, by Loner's accounts, from Robert Modt and Robert Lie for £70.

Embassy for visé of passport for D. Hechstetter going to Germany 3/4; cost of passport, John Denton to Court, and fetchling 3 horses 15/-. 2 white horses bought from Maister Manntpe £15, and one in Schmidtfeld £7, to be sent to Germany with D. Hechstetter; also saddles, bridles, etc., £3 5 5, curry comb, towel and sponge 2/7, shoeing 1/8; man who helped to buy the horses 7/- and keep 41 days, 35/-. Book of Acts of Parliament, 2/-. Passport for C. Bodner 3/-. Hans Pesch [Bescht, the carter] a poor German, 5/-. For H. Wolsiter, a pair "Niderstecken" (? under-drawers) 2/6. Radermacher's servant Steffan for an "orlaggio" (? watch) that had belonged to Höchstetter 6/- and on travelling to Germany £16. C. Bodner going to Antwerp, £1 10 0; Mark Steinberger *ditto* £5 5 6. July 23, A German named Hans Hess travelling to Keswick, 4/-.

August (K.)—Heinrich Fletscher (Cockermouth) for 2½ tuns wine bought in 1570, £22 6 8; 2 tuns bought July 28, £16; 28½ stone tallow £3 16 0; groceries 8/-. Given by Mrs. Hechstetter in Augsburg to H. Walsitter's wife 1 fl. 8 kr., and by D. Hechstetter to H. Walsitter 2 fl.—11/9. (L.)—Maister Niclass Awger for 21 cwt. tallow £19 17 6; to the porters taking it aboard ship and for a cocket * 5/8. Freight on copper from Newcastle May 7 to Aug. 13, to eighteen skippers. [Loner notes that some of them brought short weight; it was ultimately found that the scales in Keswick, Newcastle and London were not exactly alike]. Aug. 24, 2 "talles oder kerben" (tallies) for Mr. Burd, to pay us the £400 (from the Queen for copper) 5/4.

Law costs:—Maister Blythe for sealing the commission sent to Newcastle 6/8; a parchment quittance 1/-; a breakfast at Westminster to Mr. Walter Milman 10d.; the door-keeper at Westminster 6d.; an advocate in the case of two men from the north, Redman and Tyddiman,† 6/7, and about the wine‡ 1/8. Counsel's opinion 4/-. Stafferton, advocate, 1/2. Advocate in the case of Fallofield "for the fyne" 20/-, and other matters 6/7. Copy of the declaration, 8d. Maister Latschmer (? Lati-mer), advocate, 6/8. Mr. Rigbie, for writing out the same, 2/-. Maister Staurton, advocate, for "d'grosing de Sannd" 20d.,

* The receipt given by Customs Officers on payment of dues.

† In the Keswick transcript of Loner's account, "Tidiman"; was this Anthony "Dediman" who had been prospecting for coal? Further entries of this suit occur in 1573.

‡ D. Ulstet had bought and sent 16 tuns of wine to Keswick without paying duty, under the belief that the Royal Company could evade customs. The mention of "wine" here refers to this business, which dragged on for a long time, but the Company had to pay, on Aug. 24, 1571, £38 14s. 7d.

and "for dutrid*" 4d. In the Gildhall "for dem mylord meren" (Lord Mayor) about wine, 3/2, Maister Loyse (? Lewis) writing a letter, 2/-. Mr. Prat's son Willm a day and a night going to Hambdton Curdt with a letter for Maister Nidam (Needham) 2/8.

September (K.).—Beer brewed at the Island for the master's house, £7 15 0; Cristoff Newthron, brewer's man, wages ½ year, 10/-. Wolff Hund, our smith, on his wedding £1. Letter to Mester Schriff von Westmerlandt (Sheriff of Westmorland) 2/6. Gawen Youdal for fetching the boat-builders 2/-; string 8d.; 2 bread-baskets, 7d.; poor man 4d.; roses to distil rose-water 1/8; clothes-brush 1/-; making a washing-bench 8d.; canvas for shirt for a poor boy, 1/10½; getting our four boats ashore and mending them 2/-. Christoff Wurn mowing our 2 meadows, 19/8; making and leading hay, £2 10 0; ale and bread for the men, 2/-; clearing the meadows, 1/8.

October (K.).—S. Kalcher and S. Nusspaumer on their weddings, each 10/-. John Wilson for vegetables, etc., 13/4; a stranger for 2 lb. pepper 6/-. Deducted from A. Reindl's pay for his brother in Kützbüchel (Kitzbüchel, between Kufstein and Zell am See) £1. 3½ yards red cloth at 9/- to make coats for our constables, Wm. Grienop and John Banckh, as usual once every 2 years. Bishop of Carlisle on a bill of exchange £180. (L.).—Ships bringing copper from Newcastle to London, continued from Aug. 14 to Oct. 15. Oct. 7, dinner to the officers of the Tower, with wine, 15/8; to the servants of "Maister Schwisten," sergeant of the Admiralty 3/4. Oct. 25, Jörg Martin of Freyburg, miner, to Keswick 7/-.

November (K.).—John Buckbarr for riding with U. Frass to Greystoke to get money, 6d. Stup for taking us twice over the water to Brandellhow, 4d. On Daniel Höchstetter's birthday, wine to 74 German men, 1 quart each at 5d., and 36 quarts to the English workmen at the mines and Smelthouses, £2 5 10. H. Wautter lending his horse for R. Ledes to ride to Lancaster, Furness and Carlisle, 3/-. Nov. 25, Loner paid for M. Stainberger to the skipper at Dover £2 5 0, and to Steinberger at Dover, 10/-, and in London £2; for the two smelters £3, and to Bernhard (Fechtenbach ?) smelter, 15/-.

December (K.).—Stable (the carrier) taking 2 smelters and their wives to Keswick, 4 horses £3 6 8. 33 ells canvas to lay over the boards in the new office, 13/9; 5 ells on a bed, 2/1; 11 ells

* These two phrases are copied by the German clerk (Merer) from English writing, which he apparently did not understand.

coarse woollen cloth at 11d. to hang on walls. H. Corwen for $\frac{1}{2}$ tun red wine for D. and Mrs. Hechstetter, £6 4 6. Carriage of 2 casks Lunenburg to Nürnberg and thence to England, also a trunk of clothes for H. Merer, Augsburg to Nuremberg and England £5 2 11. Dec. 24, new cross-window in the new office; mending glass in house and Smelthouses £1 6 8 $\frac{1}{2}$. Clothes for our poor boy who turns the spit in the kitchen 6/8. Nailing down cloth on the office floor 2/4. Mending bellows and making a cushion, 1/6. A lad for taking a carpenter to Caldbeck, 5d. Our old former caretaker when she had a child baptized, 3/-. Jorg Kessler, on baptism of his child 3/-. A cover (mat ?) of straw for the office, 5/-. Milady's servant bringing game 1/-. Soap 1/8.

These items, with some to the locksmith before, show that a new office was being prepared, and the whole place and staff put in order, for the Hechstetters, who were by now in London. Loner's account of their arrival and stay there will be best told with the events of next year. Meanwhile, to close the statement for 1571:—

Dec. 31. Bad debts.—Hanns Haml, miner, dead and rotten, owed £16 18 11; Jörg Bachmair, former workman, dead, £1 9 10 $\frac{1}{2}$; David Flitt, former English sorter, run away, £2 1 9; Dickh Kiperer, former English sorter, £1 6 4; John Fisher of Cockermouth £1; also Anthony Benson, to whom was lent in Junckher Ludwig Haug's time 19/10, a bad debt.

Queen Elizabeth pays us for copper £4000.

Total expenses of the year £1359 6 7 $\frac{1}{4}$.

(Signed) H. MERER.

the first of these is the fact that the first of the three
groups is the most numerous, and the second is the
second most numerous, and the third is the least numerous.

The second of these is the fact that the first of the three
groups is the most numerous, and the second is the second
most numerous, and the third is the least numerous. This is
the same as the first of the three groups, and the second is
the second most numerous, and the third is the least numerous.

The third of these is the fact that the first of the three
groups is the most numerous, and the second is the second
most numerous, and the third is the least numerous. This is
the same as the first of the three groups, and the second is
the second most numerous, and the third is the least numerous.

The fourth of these is the fact that the first of the three
groups is the most numerous, and the second is the second
most numerous, and the third is the least numerous. This is
the same as the first of the three groups, and the second is
the second most numerous, and the third is the least numerous.

THE JOURNAL OF THE



A COUNTING-HOUSE
after Josse Damhoudere, *Praxis Rerum Civilium*,
Antwerp, 1557.



THE GREAT LAKES
AND THE ST. LAWRENCE RIVER
AND THE GULF OF ST. LAWRENCE

THE HECHSTETTER FAMILY IN ENGLAND, 1572.

IN July, 1571, Daniel Hechstetter went to Germany, and brought back his family to London in the autumn. Loner's entries for their board and lodging, at the house of Mrs. Christian Safftung (? Softtunge), where he lived, are: "From Nov. 15 to March 18, 124 days, Daniel Höchstetter, his wife, 5 children and 2 maids at 10/- a day, £62." "Mrs. Christian for a bed and room in which Daniel Hechstetter with his wife and children lay when they came from Augsburg to London, £2 10 0." The names of the children were: Annamaria, who must have been at least thirteen or fourteen, for she married Mark Steinberger three years later; Emanuel, Daniel, Fronica (Veronica), and Susanna. Mrs. Radigunda Hechstetter I suppose to have been a Stammler, as one of the name is called D. Hechstetter's brother-in-law.

Of their travelling from Augsburg to Calais we have no record, but Loner has set down the expenses of the later part of this rather adventurous journey:—

Ship, Calais to Dover, £2 13 4, and "drinckgelt" 3/4. In the village where Höchstetter landed* £1 17 0. The 2 smelters and their wives and 1 man whom they brought, to London from the place where they landed £1 17 0. Loner, Needham, his wife, daughter and one servant, London to Dover £2 17 4; waiting for Höchstetter, and one day after he landed £6 18 0; 2 horses from the village to Dover, 2/-. Two carriages from Dover to Gravesend, one of them to go on *to town* (in thuna) £4 10 0; given to the men, 3/4. Three horses to Canterbury 6/-; 2 meals there† £1 18 0. Dinner at Sittingbourne £1 8 0;

* The Dover boat apparently could not make the harbour, but set passengers ashore at some other place.

† Supper and breakfast for the party with expenses for the night?

3 horses to the above, 6/- . Three horses to Gravesend,* 2/- ; there over night £1 16 0. Three boats with drinks to the men, £1 2 0. Cortason the "post" for bringing the Höchstetters from Antwerp £3. A carriage to go to Keswick† (with the smelters) £6 ; a piece of "Carise" for cover to it £1 10 0 ; extra to Stable for taking them 2/- . John Wyth who went with Loner and Needham to Dover, for his trouble 2/-.—£38 16 4.

One of the first items on arrival in London is "Mrs. Höchstetter's washing, 14/-." Then follow :—

Nov. 29.—Annamaria, 20/- ; Maid, a pair of stockings, 1/1 ; D. Höchstetter, 2/- ; Hanns Franckh [surgeon], 8/- ; D. Höchstetter, 10/- ; Shoemaker, 25/- ; tailor, £5 10 0. Dec. 21.—D. Höchstetter, 10/- . Jan. 11.—Daughter, 6/- . Jan. 16.—Tailor, 8/6.

"Five iron spoons, 1/4," are not put down to Höchstetter, but look like additional table-furniture for this large family.

Loner's New Year's gifts :—Mrs. Christian, 10/- ; her mother, 5/- ; Elizabeth, 5/- ; Lucas, 5/- ; Hans, 3/- ; 3 maids, 10/- ; Raphael the postmaster, 5/- ; his man, 2/6 ; the post and another, 5/- ; porter at Court, 2/- . With these is entered Rhubarb, 5/- .

Sent to Keswick by Newcastle for the Höchstetters : white (*i.e.*, dried) pease ; 1 firkin soft soap, 13/- ; salad oil.—£3 12 4. Also groceries, 6 pans, 16 dishes and other utensils, 3 porringers (Parranger),‡ 1/6 ; 12 spoons and salt cellar, 4 bed covers and 1 white one.—£10 8 10.

* Strangers commonly arryue at Grauesende, inhabited by people who have beene themselves in forrayne parts, and are apt to vse like extortions to them, as perhappes themselves have receaued abroade. And indeede generally that towne giues such ill intertaynement to the very English, as fewe men of the better sorte will lodge there, but vpon necessity.—Fynes Morison, ed. Charles Hughes. The bill, however, was smaller than at Canterbury.

† Apparently all the way. The posting road was by Kendal and Grasmere, and this carriage must have been taken by the old Thirlmere road (west of the lake), now destroyed by the Manchester waterworks.

‡ Explained in another entry as "3 small dishes *zu der potegha*"—for porridge, apparently unfamiliar, or it would have been called *Habermuss*, as in Switzerland. Höchstetter must have seen it at Keswick, and meant his children to eat it.

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Loner's general expenses, Jan. 16, include—4 lb. blotting powder, 1/4; candles at 3½d. the lb.; 3 links? (Windlichter), 1/-; clothes-brush and scrubber, 1/10; Stainberger for 2 cases of penknives, 5/-; binding 6 account books, 8/-; making a key and mending a fire-dog, 10d.; nails and needles, 8d.; lacing and packing needle for the cart, 10d.; canvas *ditto*, 2/-; ruddle and sulphur, 3d.; a carrier, to take a letter to Keswick, 3d.; mending window, 8d.; mending bridle, 4d.; 200 pens, 8d.; ½ lb. blacking for boots, 6d. Stable (the carrier) for taking Jörg Hölzlin and Lienhardt the carter to Keswick, £1 13 4. Getting Höchstetter's luggage from the boat, 1/5. Taking the 2 smelters twice across the water,* 3d. Basket to send groceries, etc., to Keswick, 2/6; two handles for a box, 4d.; pieces with which to pack the box, etc., 6d. Milk for the baby, 1/8. Sweeping the chimney, 3d. White sugar candy and brandy, 1/5.

Feb. 26, D. Höchstetter spent:—Taking the children to see a bear-baiting, 11d.; to see the Lions and to go to Rottloff (Ratcliffe?), 9d.; apples and "Seiten," 9d.; L. Stamler's shoemaker, 10d.; sharpening five scissors, 6d.; mending shoes, 1/6; marchpane, 4/2; 3 pair shoes for the maids, 2/7; a clock key, 8d.; knife-sheath for Annamaria, 3d.; etc.

Loner has, Feb. 14, wood burnt in London while the Höchstetters were here, £1 18 8; washing for Mrs. H. and us, 17/-. March 19, 100 great faggots and 500 billets of wood, while Höchstetter was here, 12/4.

Mrs. Höchstetter going to Greenwich, for a boat, 7/-, and several times to Court at Greenwich and Westminster, 8/-.

Then we get the expenses of their journey northwards:—

Roger Jackheson, carrier, taking the Höchstetters to Keswick, his pay £10, of which £6 in London, the balance at Keswick. D. Höchstetter for the journey, £30. Ambergris which Mrs. Höchstetter took, 1/4. Two chains (Kettine) to stretch under the carriage,† 2/6; making the carriage comfortable to sit in, 6/-. Horse for Robin to ride to Ware, 3/4.‡ And after they

* They stayed at an inn in Southwark, and their bill, which Loner paid March 8th, came to £6 13s. 6d.

† Slings instead of springs. In July, 1571, is the entry, "8 iron Kettine for the copper-cart, 18/10."

‡ An undated entry of Loner's must refer to a later journey: "Richard Blom, carter, of Kendal, for 2 horses which D. Höchstetter and his wife rode from London to Keswick, £1 6 8; and for the horse which Ulrich Frass rode, 10/-."

were gone, March 25, Grease, 4d.; glass inkpot, 4d.; various things Mrs. H. took to Keswick, 9/4; sponge for her, and a scrubber, 1/6; paid Maister Dietzer (Ditcher), landlord of the Bell, horse-keep, £2 5 0. George Needham's horse, lent for this journey, £3 14 6; smith and saddler, 7d.; 2 horses for Robin and Jörg* Loner to St. Albans, 6/-; links, candles and mending a rat-trap, 4/7. April 12, paid the washerwoman for Mrs. H., £1 7 6; mending a silver spoon, 8d. April 14, various religious books ordered by Mr. Dalston for the church at Keswick, £3 5 0.

So, for the present, we lose sight of the family, for there is no *Keswick Journal* this year. But from the Crowthwaite Registers we learn that on May 14th Mrs. Hechstetter's sixth child was baptized and named apparently after the head of the firm, David.

It may be convenient here to sketch the fortunes of these six children and those born later into the family, for the Höchstetters were a capable and stirring race, and left some mark in the country they adopted as their home.

ANNAMARIA married Mark Steinberger 1575, and had children—Johannes Matheus 1576, Annamaria 1577 (who married Leonard Bristowe of Keswick 1594), Katheren 1579 (married Gawen Banke of Keswick 1597), Magdalene 1580 (died 1586), Daniel 1581 (died 1585), William 1582, another Daniel (buried March 13th, 1586-7) and his twin sister *Susanna* (baptized April 16th, 1587), Emanuell (baptized October 20th, 1588), and Francis (buried October 16th, 1588). *Susanna* Steinberger, the youngest daughter, married Thomas Rawlinson, of Grisedale Hall, near Hawkshead, in 1608, and was the mother of Elizabeth, John, Robert, Daniel, Susanna, and Radagunga; of whom Daniel, born 1614-5, died 1679, became a London wine-merchant, benefactor of Hawkshead School, friend of Pepys the diarist, and father of Sir Thomas Rawlinson,

* Caspar, Loner's young brother, was previously named. Now we have George, and soon afterwards George's father.

1870. The first of these is the...

second is the...

third is the...

fourth is the...

fifth is the...

sixth is the...

seventh is the...

eighth is the...

ninth is the...

tenth is the...

eleventh is the...

twelfth is the...

thirteenth is the...

fourteenth is the...

Lord Mayor. Sir Thomas's sons were famous antiquaries and book-collectors of Oxford and London (see Mr. H. S. Cowper's *Hawkshead, its History, etc.*, 387-391); his grandson was Lord Mayor.

EMANUEL Hechstetter we shall find in the emplot of the Company before these accounts close. His children by Thomazine his wife were: Daniel (baptized at Crosthwaite 1592), *Joseph* 1593, Ambrose 1594, Samuel (born and died 1595), *Thomazine* 1596, Jerome 1599, Susanna 1602, Barbara 160-, Jane 1608, Jonathan 1612. Thomazine Hechstetter was buried March 22nd, 1612-3, in the "quier" of Crosthwaite Church, and Emanuel, who had succeeded his father as director of the Mining Company, was buried there August 13th, 1614. Of their children, *Joseph* married, 1616, Joyce Bankes of Keswick, sister to Sir John Bankes, Lord Chief Justice; *Joseph* lived at Smelting-houses, and had children by Joyce, Jane, died young, and *Joseph*; by a second wife, Margaret, he had Thomazine and Margaret, twins, died infants, Anne, Emanuel, Thomazine, and Katharine. He died 1656 and was buried in the choir of Crosthwaite Church. His sister *Thomazine* m. 1613, George Tullye, of Carlisle, and had sons Timothy 1613-4 (father of Thomas Tully, LL.D., Dean of Carlisle, among whose children were Jerome, Sheriff of Cumberland 17 George II., and Isabella, who married John Waugh, Dean of Worcester, and was mother of the five Miss Waughs of Tullie House), Thomas, D.D., Dean of Ripon, and Isaac, Mayor of Carlisle and Writer of the Narrative of the Siege of Carlisle, 1644-5 (his son George became sub-Dean of York, etc.).

DANIEL Hechstetter, junior, and Jane his wife had children, Roger 1591, *Francis* 1593, Radigunda 1594, Nathaniel 1595, and Samuel 1599. Of these, *Francis* and Elizabeth his wife had children Grace, Jane, Christina, Francis, *Daniel*, Roger, and *Elizabeth*. *Daniel* became M.A. of Queen's College, Oxford, Master of Carlisle

Grammar School, and Rector of Bolton, where he was buried April 7th, 1686. *Elizabeth* married, 1653, Percival Radcliffe, appointed in the following year to the Vicarage of Crosthwaite.

FRONICA was buried at Crosthwaite 1587.

SUSANNA married Allan Nicholson, of Hawkshead Hall, August 4th, 1595. He was a supporter of the mining industry of the Germans at Coniston, and a man of public spirit who is said to have secured the privileges of a market town to Hawkshead; and his relative, Richard Braithwaite the poet, wrote of him, "The North nere bred sincerer, purer man." The children of this marriage were Nathaniel, 1597, compounded for knighthood 1631-2 and Parliamentary officer in the Civil Wars; Daniel, 1599; Christopher, 1602, alderman and sheriff of Newcastle-upon-Tyne; and Elizabeth. After Allan's death, his widow, Susanna, won a famous lawsuit in 1619 against the township of Claife concerning the old mill, and died in 1642.

DAVID, the English-born son, became S.T.B., and vicar of Brough under Stainmoor, 1611; he married Alsie Anderson of Keswick 1612 and died 1623.

ELIZABETH, baptized February 2nd, 1574, was buried at Crosthwaite 1594.

LEONARD, born and died 1578, was the last of the children.

The family had come to England at a stormy period in the history of the business, for its early hopes had been dashed by the great expenses of creating the machinery and plant of so large an undertaking in an alien land, in spite of the difficulties of transport and management; and still further by the restrictions on trade, inland as well as foreign, of which we see abundant evidence in these accounts. It is perhaps permissible, even to the serious historian, to note the personal element—the motive of stirring Mrs. Hechstetter in exiling herself

to care for her too active, perhaps rather unscrupulous, but nervous and always overburdened husband. He did not live ten years more, but was buried at Crosthwaite, May 14th, 1581. "Mistres Radagunda," as the Register calls her, survived until 1610, when she was buried October 30th in Crosthwaite Church, leaving money to the school of Keswick.

But before they left London for the north we find Loner writing to Burghley (March 1st) apologizing for delay, which he attributes to the contentious conduct of some of the Company; and we have seen some examples of the difficulties raised by the English shareholders. Loner was ready, he said, to submit his accounts to be examined whenever required; and we can follow them in some detail, though choosing, for our present purpose, only the domestic and minor business entries for the year:—

May 5, Hans Mair of Radstatt going home, £4. Hans Höllenstein, £2, which he is to repay in Schwatz with £8 he owes the Company. Ruprecht Schraitenberger for bringing muffles, 3/-. Sent Mrs. H. a bottle (Schaidkolbe), in a case, 1/-. Mending window, 3d. And on Ap. 26 paid the "Burschenemt" (? chief of the prentices?) for cautioning his company? (umb die Gsellchaft zuwahrnen), 5/-.

May 13.—Account for a house taken in London: paid Mr. Harspüll for furniture, £39; rent, 1 quarter, £2 12 0.

Stable, for taking Hainrich Kupferschmidt to Keswick, £1 10 0. Sent M. Stainberger a tin pouring-can (giessfass) and a "pazill," 10/-. Washing for two months, 6/-.

June 7.—Sent to Bordeaux by the ship Thomas of London, skipper William Freeman, owner Thomas King, 100 cwt. copper. Paid the porters for carrying to cart, loading on and off cart, and taking to Rattlief (Ratcliffe) to put on board, 6/2; carmen for taking 5 tons to the waterside, 5/-; (English) customs of 100 cwt. at 2/-, £10; making and sealing a "cocket," also to the Secretary, 4/1; one piece of copper carried from and back to Ratcliffe, 8d. God in His love grant that this may be answered for, without loss!* June 14, Crane and lighter money

* 1576, Oct. 7.—Paid the Lord Treasurer on behalf of W. Burd (Treasurer to the Company) customs on the 100 cwt. copper sent a while since to Bordeaux,

on 100 cwt. of copper shipped to Bordeaux, $3/4$; to the smith for making a balance for copper, $2/6$, and for rectifying it, being too heavy, $1/8$. July 7, Mr. Jung (Young) on the 5 tons copper sent to Bordeaux, for packing and shipping as needed, $8/4$.

June 14, Heinrich Kupferschmid for his trouble going to Keswick and back, $£1$. June 19, D. Ulstatt, carriage of his clothes, Keswick to London, by Stable, $3/4$; June 7, to his son Christof, $6/-$. June 21, to a German named Stadler travelling to Keswick in search of work in the mines or suchlike; to be repaid when he can, $10/-$. Barthel Bürnberger on leaving Keswick, $£4$, and $£4$ deposited to be repaid at Antwerp or Augsburg. 1 ton Spanish iron $£21$; smith for marking it, $4d.$; porters to ship, $4d.$; wharfage, $2d.$; cocket, $6d.$. Randel Kam for whale oil, $£15$ 10 0 and $£3$ 6 10. June 28, French books, $10/-$. Elisabeth Safftunge as per account, $£60$.

House in London.—3 keys and a lock, $3/-$; 2 baskets, $9d.$; cleaning the house, $2/-$; and 6 carts of stones and rubbish carried away, $4/-$. Rent to Mr. Jems Hervy, $£2$ 10 0; 2 women cleaning the garden, $1/-$.

July 7, for H. Merer, $3\frac{1}{8}$ ells grogram $14/-$, 4 pair shoes, 1 pair slippers and a pair lasts $8/-$; given him for new minted coin (mer fanndt Ich Im an newgedruckten Müntz) $£2$ 0 8.

July 25, sales from 2 boxes of silks sent from Augsburg, $£202$. Copper delivered to Mr. Pelham for the Queen, 1000 cwt.

Aug. 3, tailor for Jörg Loner, a pair woollen stockings $4/10$, and making down a pair of his father's hose, $10/4$; pair sleeves of canvas, $2/6$; dyeing and dressing an old hood, $4/-$; baize to line it, $4/-$; making, $2/-$.

House in London.—Our parson,* for $\frac{1}{4}$ year to midsummer, $6/10$. 12 lb. candles, $3/3$.

Aug. 27, Christ. Wohrn for bringing a piece of silver $42\frac{1}{2}$ (lb. ?) weight from Keswick, $5/-$, and letter bag, $1/6$. Small parcel for Augsburg, postage as far as Antwerp, $1/6$.

Sept. 1, Martin Ernwallner drew part of the deposit he left at Keswick, $£4$. Sept. 5, Bought from Richard Stenaus, kettle-smith, and sent to Keswick by Newcastle, 6 kettles, 6 brass pots, 4 iron bands to the kettles, 1 gallon pot, $\frac{1}{4}$ gallon pot, etc.; also 2 hair-ropes for laundry $2/4$, kelp, and tarred rope; freight by John Lawson, skipper, $8/-$. Sept. 10, D. Ulstatt's son Christof,

with only the English customs paid. So I have had to pay the foreign dues also, namely $3d.$ in the $£$, and on $£200$, $50/-$. It has cost me more because I would not pay, and was arrested, and that cost me $13/4$; in all $£3$ 3 4.

* "Unserm Pfarrhern, die fröndt," ? Pfünd, *præbendum* ?

tailor, £1 19 0; self, 1/- . Sept. 12, 2 horses to court, 13/- . Given to Mr. Humphreys' son, 1/- ; cask for Keswick, 1/2 ; 43 muffles at 4d. and carriage 6d. Carrier who brought the 2 new smelters and their wives, £1 16 0. Sent to Keswick, Sept. 12, ½ lb. mercurium, 4/- ; ½ oz. moness Cristi(? manna), 6d. ; 4 oz. saffron, 4/4 ; 1 oz. mastich, 8d. ; ½ oz. civet, 4d.

Oct. 6, Jörg Sturm and Bernhard Grosch travelling with their wives, deposited £6, to be paid in Augsburg or Nuremberg. Innkeeper in Southwark for our 2 new smelters and their wives with a workman named Wolf Pindter, 10 days, £2 7 8 ; going with them to the ship, 2/8. For a poor man who lay sick of the plague with 2 others, 5/- . D. Ulstatt's son Christof, 5/- . Oct. 12, Attorney's fee in the case against R. Dudley, 6/8. Self and Mr. Pratt and servant to Windsor, 6 days, £2 6 0, and horses, 8/- . Letter from Venice, 6d. Oct. 21, Paid John Fisher, Mr. Lowther's bailiff, amount of his deposit at Keswick, according to D. Hechsetter's letter of the 8th, £100.

Nov. 4, Elizabeth Safftunge, account for board, £60. Paid Mr. Dawson here, he to repay at Keswick, £10. Nov. 13, paid Mr. Patrickson here, he to repay at Keswick, £5. Nov. 22, bought from Wm. Webb, 191 "Endt"* of Spanish iron, £26 4 6. Riding to court, 16/- . 6 copy-books for Keswick, £2 7 0. Further to hostess in Southwark for the new smelters, 4/4. Leather money-bag, 6d. Horse for Gregory Weiss, Keswick to London, 16/8 ; his clothes, carriage, 11/- . A gold balance, 5/- . Twice bringing the copper-balance and weights here from the old post-house, 1/8. Lock and key, 1/8. Charity, 4/- . D. Ulstatt's son Christof, carriage of his clothes from Antwerp, 13/- .

Dec. 3. *House in London* : paid Thomas Schmid for the lease, half of £200 ; sundries for ditto, £36 13 0. Given to Anthony Camber, Mr. Needham's servant, for helping us in the business, at his wedding, £1. Cranage (Kranagio or Krongellt) on 2 tons iron and 20 sacks kelp sent to Newcastle, 1/8. Tailor for Christ. Ulstatt, 14/- . Writing table with drawers, 16/- . 2 casks sheet brass sent to Keswick. Charity, 2/- . Two pieces Kentish cloth, £18 13 4.

Dec. 5, Mrs. Christian for H. Loner, Sept. 20, 1571, to Oct. 20, 1572, £42 18 0 ; for a boy [Jörg ?] 396 days at 1/- , £19 16 0 ; for the Höchstetters, £62 ; for Lienhart Stamler, 10 days, and Mark Stainberger, 10 days at 2/- , £2 3 4 ; for Thomas Königstorffer 8 days, 17/4 ; for Jörg Göltzle, 4 days, 4/- ; Kortesan the courier

* *i.e.*, the 2 tons sent next month to Newcastle.

who came with Höchstetter, 5 days, 10/10; extras £14 17 1.—
 £143 6 7. Dec. 18, horse for Heinrich Kupferschmid, Keswick
 to London, £1 5 0; given him for bringing silver from Keswick
 and for taking a letter to Court, 10/-. Marking a ton of iron,
 6d.; fitting copper-scales here, 7d.

The copper-scales afterwards gave trouble by not tallying with those at Newcastle and Keswick; the marking of the iron was in preparation for its shipment to Newcastle. These items lead to the consideration of the traffic between north and south by the sea route, of which we have had some mention, so far as regards the land journey by Penrith and Barnard Castle to Newcastle. Of coasting vessels on the Irish Sea we have no notice in these accounts, although it is evident that wine and other commodities were landed at Workington; but it is otherwise with the East Coast, as will appear from the next chapter.

COASTING SKIPPERS, AND AFFAIRS IN 1573.

FROM Loner's entries are hitherto omitted the names of ships and shipmasters bringing copper from Newcastle. Comparing the various lists of the different books to the end, we can correct the ill-spelt jottings of 1571 and 1572, for in the course of the accounts they come out a little more clearly, as Loner gets more familiar with them. In the following compilation I have put together what can be gathered, leaving the original spelling where the meaning is doubtful. It will be seen that the ports lie between Rochester and Dunwich, although the trade was between Newcastle and London; but that several of the skippers were Scotsmen and some by their names must have been north country men. Others, like Borne of Maldon, bear well-known local names. William Cock, commanding the "Anna" of Ipswich, one may fancy to have been an ancestor of John Ruskin, as the name (Cox), of his mother's family—East Anglian seafaring people—was originally Cock.

List of Skippers and ships carrying copper, 1571-76.

Andrew Anderson, 1572.

Thomas Borman, 1572.

John Borne, the *John* of Maldon, 1573.

William Bough ("Baug"), the *John* of Maldon, 1571.

John Bracke, the *Andrew* ("Handra") of London, 1573.

Thomas Briscoe, the *Mary George* of Bradwell, 1571-72.

Richard Burford, 1571.

William Butler, the *Thomas* of Aldeburgh, 1573-74.

Thomas Carter, 1571.

Richard Clark, 1573.

William Cock, the *Anna* of Ipswich, 1571-72.

John Conswell ("Konnswell"), 1571.

- John Costerd ("Kastart"), 1571.
 Edward Damson, 1572.
 John Edmund, the *Elizabeth* of Brightlingsea? (pronounced Brittlesea and here written "Betsa") or Bawdsey?, 1572.
 Sanders Field, the *Mary Fortune* of London, 1572-73, and the *Anna* of Aldeburgh, 1573.
 William Freeman, the *Thomas* of London, 1572 (to Bordeaux).
 Thomas Galloway of Brightlingsea ("Bertelsi"), 1573.
 John Gardener, 1573.
 Richard Goodwin ("Guetwein"), the *John* of Ipswich, 1571-72.
 John Greve of Harwich, 1571.
 John "Gumb" or "Grumbri," 1571.
 John and (or) William "Hockson," 1571.
 George Hope, the *Barbara* of Brightlingsea ("Bedelsi"), 1573.
 William Horwood ("Howed" and "Hörwarth"), the *Mary William* of London, 1572-73.
 Roger "Jäckle," "Jaxli," or "Japli," 1571, the *Anna* of Aldeburgh ("Haubroath, Houbroche, Awbrugg," etc.), 1572, and the *Matthew* of Aldeburgh ("Awburcht"), 1573.
 Robert Lawrence, 1571.
 John Lawson, the *Grace of God* of Colchester, 1571-72-73.
 Richard Mallory, 1572 (? the same as "Mr. Cochell Morell" of the *Anna Frank* at the same date: the copy is very badly written here).
 Miles Mawson, the *Thomas* of Ipswich, 1573.
 Leonard Medcalf, 1571.
 William (and once John) Michelson, the *Nightingale*, 1571-72.
 Thomas Musgrave, 1572-76.
 Edward Parker, the *Mary Flower* of Maldon, 1572.
 John "Pemwoll" (? Benwell), 1571.
 John Pinder, the *Grace of God* or *God's Grace* of Ipswich, 1571-72.
 Lawrence Porter, the *George* of Shoebury ("Schorbroche"), 1572.
 Richard Pyball ("Piboll, Balle"), 1571.
 John Rodd or Rade, 1571.
 Thomas Rudkettle ("Ruedkedell, Wuedkell"), 1571.
 John "Schamordt" (? Sampford, a place in Essex), 1572.
 Ralph Smith, the *Anna* of London, 1571-72.
 John "Seydere, Sunderin" (? Sothern) of Maldon, the *Anna* of "Aurange," 1572-73.
 James Stuart, the *Bona Ventura* of London, 1571-72-73, and the *Mary Fortune* of London, 1574.
 Stephen "Upchawe," (Upshaw) 1574.

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William Wickers (? Vickers), 1571.

John Wake, the *George* of Rochester, 1572.

Ralph "Walson" or "Velson," the *Mary James* (not the *Mary James* of Aldeburgh), 1573-74.

Thomas Wight ("Wiecht"), the *Mary James* of Aldeburgh, 1571-72-73-74.

Stephen Williamson, 1571.

Ships without names of skippers are: the *Banalla* of London, 1571, coinciding in date with Coster, Carter and Pyball; the *Bulricham*, 1571, and the *Flower* of Ipswich, 1571, same date as "Schamordt"; and the *Jessica*? (perhaps for *James*), of Dunwich, 1572, arriving in the same week with the notices of consignments by Anderson and Borman.

Several of these boats made three or four trips a year; in some cases they reappear within a month. There are no instances of sailings in December, and only one in January; few occur in November and February, but during the rest of the year this coasting-trade seems to have been pretty busy.

It may be worth while quoting here some examples of expenses at the London wharfs, connected with the transit of copper, *e.g.*:—

July 25, 1573. Received by various ships 446 cwt. 93 lb. of metal, being in nearly every case less in weight at London than at Newcastle, and less at Newcastle than at Keswick. The regularity of the deficit led Loner to suspect the weights, and an attempt was made to rectify them. At any rate, no legal proceedings seem to have been taken against the skippers who were suspected of purloining copper, and it looks as though they were not to blame. The consignments having been received, Loner adds carriage to warehouse on 52 carts at 6d., and wharfage at 2d. a cart, help to get the copper on the carts and into the house 15/6, 17 carts to Hans Radermacher's and 4 porters 2 days 8/-, 3 carts with 40 cwt. to Louis van Winghene's, and porters 1/6, and 20 cwt. to Cornelius van Erden's 1/6; in all £14 7 10.

Again, Aug. 19, 1573. Captains Butler of Aldeburgh and

Borne of Maldon bring 120 cwt. nominal, actually 119 cwt. 6 lbs. The freight was £2 2 0; quay and wharf money 11d.; carts to house 5/6; porters helping to put it into the cellar 3/6. Sending 12 cwt. 4 lb. to Antwerp for assay :—Mr. Young, clerk, for authorisation at Custom house 2/8, and writing 2 bills 2d.; greater and lesser customs, £1 4 1 and 7/2; "Schlannaugio," 8d., cocket and "Schersalom," 1/4; taking the 2 casks on the water 8d.; a certificate that the dues had been paid (which appears not to have been wanted, after all) 6/10; porters getting copper out of cellar 1/6, and putting it on lighter (Leüchter) 1/4; packing it 2/6, and 100 nails 6d.; fixing the steps into cellar 1/4.—£5 2 8.

In the following extracts from accounts for 1573, most of the standing expenses are omitted, to avoid needless repetition; and in Hans Reinbrun's lists of carriers new names only are given. Banking and general items are passed over, to find space for domestic and local entries. Those from the *Keswick Journal* are marked (K.), and those from Loner's various London books are marked (L.).

January (K).—New Year's gifts: P. Ratliff, bailey, 10/-; 2 constables, each 10/-; the parson, 5/-; Ulrich Frass' wife,* 5/-; 3 maids in the house, 6/-; the brewer, carrier and lads in the house, 8/-; players with fiddle and pipe, 4/-. William Fleming [Rydal] for charcoal, £60; he still has to deliver 2400 loads. Jan. 14, Ed. Braddy received in London £167 (which was repaid in Kendal, Feb. 7). George Grigg and others, kelp for refining silver, £2 1 4½. Jan. 30, Wolff Hund on his wedding,† 10/-. John Wilson, cloth for our boy Cristal, 3/2. Carrier from Kendal, £1 2 4.

(L).—Jörg Deuffer travelling to Germany drew out £3. New Year's gifts to postmen 5/-, 5/-, and 2/6, and to household 8/-. Jan. 28, Received from Franz Schorer and brothers for copper, £250.

February (K).—Mrs. Höchstetter's housekeeping, Christmas to Feb. 7, £23 16 11. U. Frass' account for workmen's board, malt and oats, Christmas to Feb. 7, £190 2 5. [These regular

* U. Frass married Mabel Radcliffe in 1567.

† He had married Eliz. Bulfell of Wythburn some time before, and he died soon after this.

items recur at intervals but need not be always copied.] Feb. 16, Lienhart Schmidt on his wedding,* 10/-.

(L).—Sold to Queen Elizabeth through Mr. Pelham 666 $\frac{2}{3}$ cwt. copper at 60/—£2000, the money paid Feb. 25. The expenses attending the payment were:—Wm. Damsel who brought us the news, 2 sugarloaves, £1 2 0; his clerk, £1; porters and servants, 2/6; bringing money home, 1/-; Mr. Pelham's man Herman, 10/-. Bills of exchange, Richard Lowther, £100; Richard Bindloss for W. Fleming, £60; Henry Lamplugh, £5; John Denton, £4.

March (K).—George Lamplugh has paid through his son Edward on a debt of £100, £91 9 0. March 18, Lady K. Ratliff, wife of George Ratliff, received through their son the Bailey† and their chaplain, rent of meadow taken May, '69 £11. March 20, curtain to window in our parlour, 10/-; feathers for a bed, 8/10; 2 spice sieves and 3 graters, 2/10; pots, pans and cooking spoons, 8/7. Glass window, 3/-; lantern, 3/6. 3 "marckhschloss" (? padlocks), 2/6; 4 iron screws on a little chest, 1/-.

March 27. W. Prugger's wife, £2 5 0; L. Diringer's wife [in Germany], £1 2 6, his wages as carter at 3/- a week; L. Schmidt's board and wages at 5/-. Dick Nixon, carter's man at 3/- and John Dixon 3/- for one week's work with the horses. J. Buckbarr for oats £8 8 0; Christ. Hutson for hay, £1 2 0; the Parson *ditto*, 13/4; Robt. Damson *ditto*, £1 6 8. Breaking in a young horse, 3/1. Mending our 2 great boats, £4 6 8; Bernard Wagger (Walker) and Chris. Thwait for 261 lb. pitch, £1 1 9; John Wilson 24 gallon tar, £1 12 0; 990 boat nails, £1 9 10. Mending mine lamps, etc., 2/2. Mending the still in which brandy is made, 1/- . Mr. Simson for prosecuting the wood-thief, 10/-. J. Wilson, blue cloth for boys' clothes, 18/3; lining and buttons, 4/9; linen for boy's shirt, 1/6; 7 ells inferior cloth for turnspit boy, 3/4. Woman to help washing, several times, 7/4; kelp for washing, 5/4.

Wolff Hund, our late smith, deceased in God, owed us £2 19 0; but he leaves nothing except wife and baby; we write this off to general expenses. Also one of our smelters, Hans Höss, is

* "Leonard Smith duchman" married Agnes Tailer, servant in Keswick 1572, and had a son John 1573-4.

† Percival Radcliffe, of whom it is not elsewhere stated that he was a son of Sir George and Lady Radcliffe. The son and heir in 1577 was Francis, who succeeded. Anne, mentioned in Crosthwaite Register 1566, may have been a daughter (*C. and W. Transactions*, n.s., iv., p. 312). The trustees "of the children" have been already named (p. 47) in connection with this tenancy, though the terms then stated are not now adhered to.

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disabled, being lamed of an arm, and has been under doctors for some time; he owes £4 1 0, but since nobody here can do him any good we have sent him to London, and write off his debt to general expenses. The said H. Höss promises, if God restores his health, to come back at his own expense and work off his debt.

Master's board this term, £32 0 7; men's, £283 5 2. One pig, 5/-; Bernard Wagkher for 2 bushel perch to fatten our swine therewith, 6/-, and malt for hens, geese and ducks, 4/1. Friderich Wilnberger, tailor, 12 weeks keep, £1 4 0.

Smelters: given, by old use and wont, to them on making silver and copper, 52 quarts wine, 17/4. (The staff:—) T. Wallner, foreman, Staudacher, Stampfer, Fechtenbach, Altschmer, Grasendorfer, Schiper, all 12 weeks, and Höss 10 weeks: Uli Nixon, Edi Gasgel, Robert Birkland, at 3/-; Robert Banke, caretaker, at 4/-, he and his son crushing £2 4 4; Thomas Banke for sieves, etc., £1 3 3. Iron-slag (Schlaggen) and bones (painer) to the furnace (Capell), 8/6. Miles and Wm. Atthow, John Bretel, and 8 others stoking, etc., £20 0 6. N.B.—These work irregular times because we cannot tell how long the smelting will take. In all—£82 0 7.

Smithy:—P. Kolseisen, the late W. Hund, A Ringscisen, Parse and Dick Waterson. Hide for bellows from Greenop, 10/-.—£26 2 2.

Building:—W. Prugger, T. Scot, carpenters; Stephen Buser and Adam Fisher, wallers. P. Wood carrying stone from Borrowdale, and W. Westeral mending the wall round garden of the master's house—£11 9 12. Stone wall round garden on Island, £1 14 8; rope to well there, 5/-.

Hans Reinbrun's accounts:—Carthorse sold to a farmer, 14/-. Paid for peat delivered £138 8 8, in advance £221 6 8; for charcoal carrying, £39 17 2; for stonecoal — to John Dauson and John Lowson, colliers at Bolton, £6 5 0, also J. Dauson sinking 7 fathom in the shaft £4 13 4 and J. Lowson sinking 6 fathom £4, and carriage making total for stonecoal, £20 14 8; for carrying lime, £11 6 10; carrying ore, £2 17 6; and wood, £9 18 4. The names of carriers not occurring in the last list are:—

Peat:—John and Wm. Aleson, Robert Atkinson, Nicholas Bulfeldt, John Clement, John Dath, Xfer Dauson, Mabel Fisher, John Gilbanck, John Hutson, John Jaxson, Robt. Moss, John Niclason, John Raven, Cuthbert and John Ritson, John Robinson, Wm. Scot, Edwd. Stanger, John Steel, John and Wm. Thwait, Anthony Todhinder, Wm. Walker, John Wilmson, Hugh and Nicholas Wodt, and John of the Grimehowe.

£6 12 4. Ap. 22, Paid Mr Ferer for the Bishop of Carlisle, as deposited at Keswick, £50 Ap 28, U. Schlegel on way back to Keswick, £8, and Silbereisen, £10, Berger £5, Schopf £3. Hans Hess, lamed by his work, and poor, to help him away from the country, 12/- Mrs. Hechstetter, spun gold and silver for a lined hood for D. Hechstetter, £2 4 8. Thomas Felufild has not delivered charcoal at the time agreed; nevertheless we pay him £13 cash and £6 at Keswick at Michaelmas. George Lampugh, M.P. for Cockermouth? (deputato von Cacomur), deposited at Keswick £200; he is now paid £100 here, and is to receive on or before July 31 another £100.

May (L.)—Loner's house in London: Alderman Herbi, rent Christmas to Easter, £2 10 0; for a wall he built on which I have to pay £3; etc., £46 7 5. May 8, for D. Höchstetter, firelock to gun mended, 2/-; new firelock, 8/-; 100 Spanish needles, 2/6. May 18, from Christopher Mason of Grasmere, 5 cwt. tallow at 22/- and carriage £2. Benedict Offendler, £8.

(K.)—May 16. Richard Lowther through Richard Cleburn received from Loner to be repaid at Keswick, £100.

June (K.)—Hans Reiter before leaving deposited £24 2 0. June 12, Richard Lowther paid Henry Fletcher for us £60 on account. Gregory Weiss travelling London to Keswick with 1 horse, £1 9 5. D. Höchstetter and party going to London, £7 6 0. Martin Kendler, leaving Keswick, deposited £28; and interest on £140 invested in the Company, £4 0 9.

Hechstetter, Reinbrun and Ledes to Carlisle when the twelve miners were examined, 16/3. Frass to Newcastle and back on business, 16/2. Frass and Ledes to Kendal for money, 4/8.

July 25, Frass to Newcastle to compare Anderson's weighing machine, 2/6.

Island :—2 women working in garden, 3/-; servants of Mr. Darston and Mr. Philipson bringing us 2 kids and a cow, 1/2; the Bishop's servant bringing us an Indian fowl, 1/-, etc. Martin Haris, our brewer, wages Christmas to June 25, £5 10 0; to his wife for her trouble, 10/-, and to him on dismissal, 4/-.* A'so 2000 young "Felber" planted.

House.—Cuthbert Fisher, kitchen boy, year's wages, £1; coat and hose, 13/4. Our maid Peggy Raven ("begi Rawin") wages, £1. Our cook Anna (Eirlin) part wages in advance, 10/-. 2 pair sheets £4 4 0; mattress 5/-; can, 10d.; wooden piggins, etc., 5/10; 2 tin keys, 1/1. F. Wilmberger, board, 11 weeks, £1 2.

* Their child, Annamaria, was buried at Crosthwaite April 15th, 1573.

Wooden "Springers" for the horses,* because they could not leap "über die Heün" (? hay, or="Hain," woods?).

Caldbeck Stamp.—Wolff Hochholzer contracted to build this for £20, but was unable to carry out his contract for that sum. Considering the great inconveniences resulting, at Hechstetter's suggestion the stamp was valued by skilled carpenters on their oath, in presence of Steinberger, Kendler and Häring, at £36 12 6, and Hochholzer has now finished the work, namely:—the courtyard (Hoffstatt), a room on 3 siles,† dry-stone wall round the house, roof and so forth (das Zimmer uf 3 Seülen under das Dach zubringen, und d. Hauss mit einer Trückhnen Maur umbfangen, Sampt den Dachdeckhen und dergleich); also the watercourses and wheel, and "ein Waldpaum mit 12 Schiessern," with the "Senstockh," two sluices (Wasserhaubtern) and 5 pits (Wasser-sümpff); moreover supplying labour to dig water-trenches, carry wood and make the road needed to the Stamp. Since there is need of further building at the Stamp to provide lodging there, Hochholzer has been employed on it as time work on wages; and by his own account this job has run up to £46, though he has received no more than awarded, namely £36 12 6.

Smelters as last time, with Rueprecht Schritt and Hanns Stadler, £80 10 7½. *Smiths* the same with John Brigg instead of Parse Waterson, £14 4 7. *Building*, same carpenters but no wallers, £12 11 3.

Coal mine at Bolton, wages £8 7 7. Hans Reinbrun for peat, etc., carried, £88 9 11½.

NEWLANDS:—Häring, Wiser, Stadler and Jorg Mortton on wages; J. Diffing, T. Fletcher, J. Hutson, J. Scott, Dick Studar.

Contract work at *God's Gift*, Nusspaumer in the shaft at *St. George*. Tributing at *God's Gift*, Kessler, Clocker, H. and B. Moser and Underweger; Högler, L. Prugger, Schram and Dorer; Reindl and Lindesperger; Mazler, Paintner, Operer, Weitgassner, Kalcher, Beckh, Eisel, Hofer, Colmanstetter, Siber, Wurzer and Stär. Sorter, J. Wiser.—£98 8 1.

Newlands Stamp:—Murr, Japson, Fisher, Crosstat; Reichel's and Kolseisen's wives at 4d.—£7 5 1½.

CALDBECK:—Dorn, foreman at 1/- a week extra. Fabian

* I suppose this means the wooden horse-clogs provided for horses on Solway sands and other soft ground.

† The cottage of the period was built on A-shaped timbers or siles, resting on the ground, three pairs of which formed a house of two bays, and the drystone walling was built on and around this skeleton structure, with high-pitched roof coming down to low eaves.

Erhart* has been made foreman at 10/- a week to look after the building. Ernwallner on wages at 6/6, Faninger and Reihel at 5/6 a week, Nuspaumer at 1/- a day; T. Crosstet, P. Smith, H. Daston and W. Moor pumping at 6d. a day. Stephen Buser, waller, mending men's lodging, 8/4.

Contract work at *St. Emanuel*, Häckl, Fabian and Hans Erhart; Scheüher, Faninger, Dorn and P. Mair; Reihel. Contract at the *New Adit*, Heisel and Buchberger. Hochholzer's mining job, £25, less advance £15. Sorters, E. Allason and J. Bue.—£95 2 2.

Net expenses of St. James' term, £603 10 0½.

(London.)—June 4, Hainrich Kupferschmid on his wedding, as he has often shown us friendship by giving information about smelting, 10/-. Passport for Felix Wallner going abroad, 5/-. Aquafortis in a glass bottle 4/10, and to the boy who brought it 3d. Three poor miners, 7/6. Gregori going by boat to my lord Treasurer, 9d. Self and Pratt to Court thrice, £3 19 0. To Richmond, once by carriage and once by water, 4 days, £4 13 6. To Court at Greenwich several times with Needham and Pratt, £3 7 0. Young Wm. Pratt for writing letters, 10/-. A poor banished Christian who at the time had fled from France,† permitted by Government to collect, 10/-.

House in London :—Carpenter making (outside) stair and roof over it, £3. 2 German locks, £1. Lock and 2 keys for garden, 10/-. Cutting hedge in garden, 1/4. A chair, 1/-, etc. Poor-rate‡ 3 months, 6/-.

June 15, sent to Keswick, cask with mufles from Dort, freight, 3/8; 1 lb. preserved ginger, 4/-; 1½ lb. turnip seed for Steinberger, 4/6; 1 lb. "Roiss" (black), 4 lb. linseed oil, 4 lb. yellow paint, 1 bottle for F. Wellenberger, 5/2.

June 18, Christopher Ulstatt's shoemaker, 26/8; mending old shirts, 16/-; self, 12/2.

July 29, *House in London* :—The scavenger ¼ year, 1/- . The Beadle "Warhold" ¼ year to midsummer, 3/4, and for making a "Harnisch" (harness), 3/4. The parson, church-money ¼ year to midsummer, 6/10; Alderman Herri ¼ year rent, £2 10 0. Church clerk, paid Ap. 1 for half year 6/-, and for alms bag 3 months, 6/-.

* The name in the Crosthwaite Register, which appears to read "Fabyan Dahart," must be this man's. He married, 1573-4, Agnes Carus, widow of Michel Carius.

† The massacre of St. Bartholomew had occurred in the previous August. Two years later Queen Elizabeth burnt Dutch Anabaptists at Smithfield.

‡ In 1563 poor-rates were fixed by law and raised by distress on defaulters.

CONSIDERABLE attention has been given to the study of the various factors which enter into the causation of disease, and it is now generally recognized that the environment, including the physical, chemical, and biological surroundings, as well as the hereditary constitution, play a part in the causation of disease. The study of the environment, however, has not been so thoroughly investigated as the study of the hereditary constitution, and it is therefore of interest to learn of the results of the study of the environment in the causation of disease.

The study of the environment in the causation of disease has been carried out in many different ways, and the results have been somewhat conflicting. Some investigators have found that the environment plays a part in the causation of disease, while others have found that it does not. The results of the study of the environment in the causation of disease have been influenced by many factors, including the method of study, the subjects of the study, and the results of the study. The method of study has been either observational or experimental, and the subjects of the study have been either human beings or animals. The results of the study have been either positive or negative, and the results have been either conclusive or inconclusive.

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Aug. 12 (L.)—Paid to Hans Koller, miner, £1 3 4.

Aug. 29, Innkeeper of the Windmill, 4 horses 19 nights grazing, £1 2 6. Boat to Westminster, 1/- . Raphael the postmaster for letters, £2 1 4. 1 lb. saltpetre and 1 lb. tartar and bag for Steinberger, 2/10. Pair of knives for R. Ledes, 8d.

House in London, contribution for building a church, 2/-. Poor-rate 2 monthls, 4/-. Shoes and stockings for the maid, 1/6; the two maids on (St.) Bartholomew's [Aug. 24], 7/-. Little table with cupboard (Cobert), 10/-. Great chair, 10/-, 6 chairs, 8/-; bed, 4/6.

September 12 (K.)—L. Diringer's wife in Augsburg, from his pay, 18/9. P. Står on his wedding,* 10/-; 2 shirts for our boys on the Island, 3/8; glazier from Carlisle mending windows in house, 2/8; ringing pigs on Island, 10d.; Fleming's servant bringing game, 1/2; padlocks to boats, 1/2.

Frass to Newcastle taking copper 18/4, and to Carlisle and Cocker-mouth 5/1. R. Ledes to Furness, Calgarth and Cocker-mouth, 17/7, and with L. Stamler to Carlisle Assizes, £1 9 9. Horse for Häring going to Caldbeck, 6/-.

House:—Paulus Wauter, 5 silver spoons, £1 4 0; glasses for distilled water and for table, 6/6; locks for chest, 14/-; iron hooks and rings for curtain, 1/-; iron prop to a pouring-cask on which a tin pot hangs, 2/-.

Grasmere Stamp—(throughout the year nothing doing there). Edi Watson for caretaking this term, 2/4.

Smelting, £44 16 1; Smithy, £11 1 6; Building, £8 1 11.

Reinbrun leaving Keswick notes as paid or owed to carriers £390 5 7½, and in his absence L. S. Stamler accounts for £131 8 9½.

NEWLANDS.—£147 17 4; Newlands Stamp, now crushing "kiss schlich" (copper pyrites in shale?) and lead ore from Caldbeck, £1 14 5½.

CALDBECK.—Fabian Erhart, foreman and carpenter; also on wages, Fechtenbach, Ernwallner, Hochholzer and Hans Erhart, with W. Man and Wm. Caris and the watchwoman. Stephen Buser building a room and cellar for the men. At *St. Emanuel*, Hochholzer and H. Erhart getting lead ore,† Faninger and P. Mair, Ernwallner and Reihel. At *New Adit*, Heisel, Häckl and Buchberger. At *St. David*, Reihel, Dorn and Scheüher. At the *Stamp*, Murr as foreman, W. Studart, P. Smith, T. Crasstat and Reihel's wife. Sorters, E. Alason and J. Buc.—£75 7 5.

Net expenses of the Holy Cross term, £900 5 7½.

* See p. 107.

† This, I think, is the first lead ore the Company got at Caldbeck.

Sept. 15 (L.)—Presented to the Lord Mayor on his taking office, 1 cwt. of grapes for which paid to Melchior Manlich & Co., £3 9 0. Kentish cloth for D. Höchstetter, £10 13 4; paid his brother John, £18 3 9.

October (K.)—Our cook, Anna Eirlin, year's wages at Michaelmas £2 5 0, less 10/- advanced. 2 old carthorses sold to Hugh Watson, £3. Mrs. Hechstetter's housekeeping Sept. 12 to Oct. 30, £18 8 10, of which £16 11 6 for food. Ulrich Frass' account for workmen's board, £145 1 11.

By recent agreement and ancient usage, given to our workmen for good luck,* 13/-.

New sail for the windmill, £1 11 10½. Shoes for our boy Cristl, 1/- . John Wilson for green cloth on a "Büldtpret" in the office, 7/-; his man and another bringing game, 1/6. Rope-maker at Cockermouth for 35 reels of rope, 10/4.

R. Ledes to Lancaster, 9/7; 3 times to Carlisle, 9/10; 3 times to Cockermouth, 4/1; and with Steinberger to Penrith to meet Mr. Braddyl, 3/6. U. Frass going for money, 3/-. Robin Fletcher to London, 10/-. Letters from London, 2/-. Horse for Hering to Caldbeck, 6d.

House.—Iron firebasket in R. Ledes' room, 7/10. 2 iron bars to curtain on a bedstead, 3/-. Coarse linen for 3 pair sheets for the married couples,† 14/6. Leather cushion, 9d.

Rent to J. Bulfeldt for R. Ledes' room, half year, 7/6; dining room, 7/6; wine-cellar, 10/-; ground rent for our house, 10/-.

F. Wilmberger, board (deducted from his pay) 7 weeks, 14/-.

Daniel Ulstatt left here 2 valises, value £1 2 6; 2 Turkey carpets, £1 8 0; a brass medicine-case containing salve for wounds, 5/7; and the following books‡:—Doctor Marthin Luter's Table-talk; A book of the Origin of Life and Being out of Plutarch; "Das Sincolū Apostolicū"; History of the Turks and Muscovites; Philip de Comines' History; Book of Psalms for the Church Service; one part of the works of Hans Sachs; the whole valued at £1 9 0.

Smelting for All Saints' term, with same workmen; salt for coppering, 2/-; bones and bone-meal? (Bainer und painmel) for making cupels? (Kapell), 2/-; 10 calfskins for mending the bellows, 6/8; hair (Har) for the refining hearth, 6d.—£57 7 8.

* It is not clear on what occasion.

† Hund, Schmidt and Staerd were married this year; perhaps this and subsequent entries of a like nature refer to wedding presents.

‡ Most of these are well known, but I do not understand the "Sincolum Apostolicum" (? Simbolum).

Building, £14 9 4; and at Caldbeck Stamp work done by Thomas Scott, carpenter, and R. Mor, waller, namely:—setting up 5 sluices, 16 water-pits, and 3 pair of siles to lengthen the stamping mill by so much and to enable work to go on there in bad weather and to provide lodging for foreman, washers and workmen at the stamps; also 2 “Schlich höf,” a chimney and a “Poggart,” to drain off the water that runs down by the place, cutting and preparing all wood for boards and roof timbers, etc., all at their own charges, except carriage of wood and lime. This work they have carried out and they receive £25.

Also at Caldbeck an iron stove for the men's lodging, weight 620 lb., £6 9 0. Jorg Kössler for making a weir [place not stated], 9/-. Caldbeck mine and stamp, total expenses, £92 3 6½.

NEWLANDS.—Total expenses for All Saints' term, £136 13 10.

Copper made this term, by Steinberger's Smelthouse book, 100 cwt., and silver, by the new weights from London, 33 lb. 4 oz.

Net expenses of the term, £700 6 3¾.

London, Oct. 9, sent to Keswick by W. Stable, 6 pieces ticken or twill, £3 9 0; 2 pieces small twill, 16/6; iron balance, £2 0 4; 6 assay glasses, 4/-; basket with lock, 2/2; reckoning-board and red wax, 1/4; assay balance, 4/-. Dictionary for L. Stamler, 7/4; groceries, 17/7.

Nov. 6 (L.)—Felix Waldner, advances to him, £2 0 6, loan by Merer £1 10 0; given him to buy a packhorse £1, and for travelling £2. Gregory Weiss £2. Ulrich Schlegel, loan, £4.

Freight of ore sent to Antwerp, 2/6. Mr. Needham gave away at the Queen's foundry at the wedding [? H. Kupferschmidt's], 3/4. Silver balance sent by Richard Martins to Keswick, 7/-. Nineteen iron weights, guaging and sealing, 6/4; taking to the “Hell” (? Guildhall) and back home, 8d.; to the lead caster thereon, 1/4. Book for L. Stanler, 1/2. Christopher Wohrn, taking a dog to Keswick, and its keep, 2/2.

December 9 (L.)—The carrier who took Waldner and was not paid, now by M. Stainberger's order paid £2. Dec. 12, delivered at Newcastle for the Muscovite Co.,* copper at 70/- part payment £69 10 0.

Dec. 31, Law costs for the Keswick business, paid by Richard Prat:—Passport for our people, 2/6. Antribus, advocate, fee

* Incorporated 1554, with exclusive rights of trading from England to and through Russia, under Sebastian Cabot as governor. In 1571 Anthony Jenkinson, the agent of the Company, acted as Queen Elizabeth's ambassador to the Czar, and obtained a restoration of privileges which had been suspended. Hence, no doubt, this and subsequent dealings in copper.

in the case of Tidiman and Redman for Michaelmas term, 8/4, and for same term in Fallifield's case, 8/4. Item for Hilary term in the above cases, £1 2 0; Antribus' bill of costs for 6 terms in the case against Thomas and Richard Fellifild, £2 19 4; Item, Mr. Krief (Cliff) for examining and signing a paper for the Queen's signet to be hung thereon, about the valuation,* 4/4. Going to Court, 1/- . Mr. Powoll's servant for writing the above, 5/- . Mr. Fonschau (Fanshaw) for writing the certification of the condition of the Company's affairs, 6/8; Mr. Powell signing the above certificate, 6/8; Mr. Fonschau for inrolling it, £1; and his man, 3/4. Mr. Fonschau for a certification for the "Collectors or gatherers" of the valuation, 4/8. Riding to Court in Sept. 1572 to Reding to the Lord Treasurer about copper £1 13 4, and 12/8, and Jan. 1573 to the Lord Treasurer at Court about copper, twice, £1 5 7. Maister Fonschau for a certification "about being free from the other valuation," 4/4. Prat's salary, Whitsuntide 1572 to Christmas 1573, £30. Costs in the case against Culverwel's wife:—first to the officer about the arrest (?—umb sic zuarrestiern) and to authorise the action "in officio" (? getting a warrant), 2/8; Mr. Auein (Owen) for his opinion, 10/-. Mr. Recorder of London for his opinion, £1; Mr. Hodgesan our advocate, 3/4; to the advocate for putting the action against her into writing, 5/- and copy 1/-. Costs against R. Döldli about the impost on imported wine, when he proceeded against us:—Mr. Marwodt, advocate, Trinity term 1572, 5/-, Michaelmas term 5/-, Hilary term 5/-, Easter term 5/-. Two copies of the information 2/-. Answer to his information 3/4; his servant for writing it, 1/6. Mr. Awin (Owen) our counsellor for overseeing the answer, 10/-; his servant writing the answer, 2/-. Mr. Manwodt (? Marwood) our attorney for entering our answer, 6/8. Mr. Fonschau for allowing? (zualauiern) the answer, 6/8. Mr. Manwordt, Michaelmas term, 5/-. Prat to Keswick, £1 13 10.—£48 1 1.

Keswick Christmas Accounts.—Nov. 27, R. Ledes, 7 days' journey to see Mr. Braddyl about money, £1 7 11. D. Hechsteter and 3 others to London £5 9 5, and staying with 2 others 3 days in London when he went to court, £1 3 5.

* Apparently the valuation of the Company's stock and plant, not that of 1570, but one made 1571 (W. R. Scott, *op. cit.*). The other suits were against Tidiman and Redman, on what grounds does not appear; against T. and R. Fallowfield, possibly about non-delivery of charcoal paid for; against the wife of Culverwel, one of the shareholders, not explained; and against Richard Dudley about the wine for which D. Ulstet had hoped to escape duty (p. 116). I understand that R. Dudley, as Queen's superintendent of the mines, prosecuted Ulstet.

Robert Darston at his request was allowed to have 253 lb. iron for use in a "prunen werckh" (? sinking a well); he to pay for what he used, less scrap iron returned, £4 12 0.

L. Stamler in Reinbrun's absence pays farmers for carriage, £16 0 11.

Travelling.—Oct., R. Fletcher to London, £2 13 9. H. Merer and R. Fletcher to London, 8½ days, £2 9 4, and Fletcher's horse back, £1. R. Ledes 4 times to Cockermouth and Carlisle, 11/1. M. Steinberger and U. Frass various journeys, 6/1. Steinberger, Häring and Hochsteter's son to Caldbeck and to Mr. Bewley's, 15/-. Messenger to York on behalf of a new miner, 6/8; and another who brought a physician thence, 4/-.

Oars for our boats, 47 pieces from Darston's wood, 7/10. Carriage of various great specimens from Caldbeck and Newlands to the masters' house, 3/6. Certain farmers who found new mines, 3/-. Lord Scrup's servants, presenting a comedy, 2/-. Servants bringing game, 4/-. "Mr. Darston man for 2 goats that went on his ground and he saw them off," 2/8. Mending the well-bucket, 1/4. A German, Sebastian Meils, after good behaviour for a while, ran away in debt 18/-.

House.—3 sheets and towels for married couples, 12/4. A fish well, 8d.; spit, rod.; hooks to hang up washing, 8d.; a screwed light (? sconce) in the parlour, 1/-; 7 iron bars and 4 screws to 2 curtains, 2/-; lantern, etc., 2/11.

Coat for our constable, Wm. Grienop, 16/-. L. Diringer, carter, Robert Bickland, carter's man, each 3/- a week.

Beer used in masters' house, £8 10 0, and in brewery, 12/-. Sold to men this term, £12 1 3; wine to them, 12/11.

Simon Musgrave owed us £7 5 3, and the debt was assigned to Hugh Watson, who could get nothing out of him; so we have handed over to Watson draperies to that amount.

F. Wallner, returned to Keswick, claims £6 as part of a deposit with H. Reitter, from whose account it is deducted.

Smelters, £65 1 11. Smiths, £18 11 11½; Building, including new smelting and stamp wheel, £6 14 5.

Charcoal from Furness, 68 loads; from Borrowdale, 77½ loads; from Legbournthwaite, 78 loads; Calgarth, 5 loads; Isel park, 6 loads.

Bolton coal mine; Thomas Hari, foreman, at 4/- a week.

Smelting during 1573 has used 4002½ loads charcoal at 28d.—£466 19 2; 26,372 loads peat at 4d.—£439 10 8; 215 loads stonecoal at 4d., £43; 1180 loads lime at 2d., £9 16 8; 357½ bushel kelp at 16d., £23 16 4.

NEWLANDS expenses, £179 2 10.

CALDBECK.—On wages, F. Erhart, Ruep Kalbacher, Dorn, Reihel, Heisel, "Sigl" [as if his name were Sigmund and not Symon] Buechberger, Scheüher; and at the Stamp, Murr. Contracts at *St. Emanuel*, Dorn and Reihel, Faninger and P. Mair, Heisel and Buechberger, Häckl and Merten, Hochholzer and H. Erhart. Contracts at *New Adit*, Mazler and Colmanstetter, Häckl and Merten. Tributing at the *Rider*, Scheüher, Hochholzer, Ernwallner and H. Erhart. Sorters, Alason and Buc.—£126 13 7.

M. Steinberger has paid out for the Company from his own pocket £22 15 0, already having invested £101 5 0.

Net expenses for the Christmas term, £600.

Then follows a list of debtors and creditors, from which it appears that 44 workmen are in debt to the Company for sums ranging from 10d. (Peter Kolseisen) to £42 14s. 7d. (Thomas Eisel); while 20 men and various masters have accounts to the good. These include "die Bruder maister," 6/7 (? heads of the men's union, see p. 36, "club-money"); and William Richmond for guns supplied to the men £8 9s. 4d., sufficiently explaining the one barrel of gunpowder hitherto received at Keswick.



ACCOUNTS OF 1574, AND A DIRECTORY OF THE LAKE DISTRICT.

THE Keswick *Journals* hence to the end become a little less prolix, and Loner's London entries are not so full as when he was fresh to the business. During all the summer of 1574 he was away, and his place was taken by Jörg Közer; at Keswick Hans Merer kept the books. At both offices they were written up at the end of each term, and the dating is less precise than in former years; indeed, the first two terms are taken together in the *Journal*, as in 1573, diminishing the amount of repetition. On the other hand, there are interesting lists of country folk who received pay as carriers, arranged alphabetically according to Christian names, and not, as we should index them, by surnames; these are worth copying in full as a kind of directory of the Lake District.

KESWICK, *Shrovetide and Easter Reckoning* :—Jan., New Year's gifts, the brewer, his maid, and our carter, each 2/-; players, 2/-. Cash from Queen Elizabeth for copper, £500; Mr. Pelham's servants who helped in getting the money, £1. The Queen for silver, £100.

A watch dog with collar, 3/6.

Feb. 11, paid Richard Lowther in London, £100; Feb. 13, his lady sent us by her bailiff, £100.

March 27, the Schoolmaster from Penrith presenting a comedy, 1/4. Fabian Erhart on his wedding, 10/-.

Smelters as usual, with Ruep Schrit at 7/—£77 15 4½.

Smiths as usual, with Ludwig Staudacher breaking stonecoal 7/6.—£29 5 1½.

Charcoal from Legbourtwaith, 95 loads; from Barratal, 80 loads, from Yselbarckh, 6½ loads. Cristoff Totinder year's rent for peat road to Scido, 8/-; Cristoffer Moss rent of peat road to Flasco, 6/8. John Königstain (? Coniston) carries coal from

THE HISTORY OF THE CITY OF BOSTON
FROM 1630 TO 1800

IN 1630, the first of the Puritan settlers arrived in Boston, and the city began to grow. The first settlement was made on the site of the present city, and the first church was built. The city grew rapidly, and by 1680 it was one of the largest and most important cities in New England. The city was the center of the Puritan movement, and it was here that the first American Revolution began. The city was the birthplace of the American Republic, and it was here that the first American President was elected.

The city of Boston has a long and rich history, and it has played a major role in the development of the United States. The city was the center of the Puritan movement, and it was here that the first American Revolution began. The city was the birthplace of the American Republic, and it was here that the first American President was elected.

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Bolton and Sibenseitt, £8 19 0. Wm. Westeral cutting wood in Barras, £1 6 11.

Wythburn (Weinborn), mining at the New Cut there, Jori Staudacher, R. Schrittl and 2 English labourers, £7 5 6.

NEWLANDS.—Hans Hering, foreman; Jorg Wyser, sorter. At *St. George*, Högler and Kessler. Tributing at *God's Gift*, Kalcher, Weitgassner, Beckh, Operer, Hofer, Wurzer, Stär, Wallner, Schlegel and H. Mair. In the shaft, Clockher, B. Moser, H. Moser, Underweger, Reindl and Nusspaumer working on the west side (uff den Abent); L. Prugger, Schram, Linderperger, Paintner and Koler on the east (uff dem Morgen). T. Eisel and Siber, H. Moser and Paintner.—£352 11 9½.

CALDBECK.—F. Erhartt, foreman, Ruep Kalbacher, L. Schmidt and Jorg Merten, on wages. At *St. Emanuel* and *New Adit*, contracts, Dorn and Merten at the old field-place (feldort); Faninger and P. Mair above the same. Buechberger and J. Heisel at their old contract. Mazler and Colmanstetter at the New Adit on the hill (an d. gebürg). Tributing: Heisel, Buechberger, Faninger and P. Mair at *St. Emanuel*. Hochholzer, Scheüher, Ernwaller, H. Erhart, Reihel, Häckhel and W. Prugger at the *Rider*.—£263 14 1.

Net expenses of the 2 terms, £972 3 7½.

Loner's London accounts.—Jan. 17, Paid Christopher Fauschat for John "Halsam" of Gueswel (Goosewell) at Reinprun's request on a note from L. Stamler, £2 6 8. New Year's gifts: brewer's boy 2/-; watchmen at Custom house 2/-; woman who helps in the washing 1/-; fire-watchman 1/-; Johann Koch who also gave me a new year's gift 3/-; Raphael postmaster 5/-; Antwerp postman and another 5/-; Raphael's man 2/6; our 3 maids 7/6; English postman 1/-; men at the Customs house 2/-; to those who sit at the "Warmolt quest" (p 139.) as usual every year 2/6; parson 6/10; "scavenger or street-sweeper" ¼ year 1/-; watchman ¼ year and new year's gift, 4/4. Washerwoman 9/4; links 4/4; 2 panes of glass 2/- and glazier 6d.; 24 lb. candles 7/-; canvas for letter-bags for Herr Schwartz 2/-; Johanna our maid, 1 year's wages, 40/-.

Jan. 31, letter sent by a friend to Keswick 1/-. 6 blank books 14/8; wax, blotting powder, letter-thread, ruler, 5/-; 1 ream of writing paper 5/6. Assorted seeds 12/8. Gift to Heinrich Schmelzer 1/-. 100 "Haren"* for Hans Dempf (the locksmith at Keswick) 4/-. 3 calendars 1/-. Lent Merer 26/-, etc.

*? Horns for lanterns, which Dempf made.

Feb. 9, delivered to Richard Martin through Mr. Bradley (Pradle) 1 piece of silver, weight at Keswick $33\frac{1}{2}$ lb., here only 32 lb. $10\frac{1}{4}$ oz.—£91 5 0. Last of February, the month's housekeeping; cook's account £9 11 0; bread* £2 2 4; wine $83\frac{1}{2}$ bottles of which 5 were sack at 14d., the rest at 12d., £4 4 8. 24 sacks coals (Khollen) £1 1 0; 2000 billets wood £1 8 0. 12 lb. candles 3/9; washing 3/8; locksmith 3/-; sharpening knives 10d.; 4 oyster knives 6d.; big beer pot 1/8; shoe blacking 6d.; pair stockings for maid 1/-; a glass 1/-, etc.

March 12. Lent here to Jorg Wiser, miner, £2 10 0. March 17, Queen Elizabeth paid £500. March 20, Carl Langnauer paid for beer £8 12 0 and towards housekeeping £1 4 0; also for journey of 2 miners, L. Schmid and another, £3 19 0.

March 31: month's housekeeping; kitchen £6 5 $3\frac{1}{2}$; bread, £2 2 2; wine, 78 bottles £3 18 0; beer from Sept. 22, £8 12 0. Clerk to Christmas 4/-; fireirons, shovel and spit 7/-; washing shirts, 3/4; pair shoes for maid 10d.; poor, one month, 2/-; 36 sacks coals £1 7 6; washerwoman at the house 2/2; street sweeper 1/-; watchman $\frac{1}{4}$ year 3/4; parish beadle $\frac{1}{4}$ year to Lady Day and offertory for 7 persons to Easter 8/-; washing 1/6; 15 lb. candles, 3/10; rent £2 10 0; candles 1/4.

KESWICK, *Whitsuntide Reckoning*:—April 24, Several smelters, miners and other servants of the Company taking holiday, shot with the long bow at a mark, on St. George's Day 1573; this year there were 13 who shot, and each received on behalf of the Company a piece of cloth to make breeches of, or 5/-.

The men's board this term £88 17 2, of which through want of money we have paid only £36 9 $7\frac{1}{2}$; the balance we owe.

Men's families in Germany: Prugger's wife at 1 florin a week; Diringer's at 30 kreutzers.

Three miners who went away have given up 3 mine-lamps and a lantern, valued at 5/-.

Jörg Siber,† miner here for the past 9 years, has given so much trouble by idleness and neglect that we consider him a bad workman and now discharge him. But because he is poor and has nothing we write off as a bad debt the sum he owes—£30 19 0.

* Bread in London was always paid separately; then, as now, got from the baker and not baked at home. But there was no baker's shop at Keswick.

† Georg von Syber: I do not understand why "von" unless he were the scapegrace of a good family. "Hans Mair von Radstatt" has his own surname, and is "von Radstatt" to distinguish him from Philip Mair. The Crosthwaite Registers also suggest that G. von Syber, "George Seaver," was less steady than most of the men.

Hans Merer on May 1 has completed 4 years' service and earned fl. 560=£93 15 0.

Our maid at the brewery on the Island, Nani Stocktel (Nanny Stockdale), 1 year's wage and board £5 4 0.

When John Denton, undersheriff, and other gentlemen were here on business, their servants and horses, put up at the Bailiff's, cost 9/-.

Smelting.—£20 9 6. *Smiths.*—£10 11 8½.

Wylthburn.—B. Fechtenbach for finding the new mine 10/-; moreover it is usual that when any man finds a new mine he gets 4d. on every kibble raised for the next two terms, which makes 22 k. at 4d. *plus* 10/-, 17/4.

NEWLANDS.—Hering, L. Prugger, H. Mair, Schram, Underweger, Nusspaumer, Kalcher, H. and B. Moser, Weitgassner, Beckh, Hofer, Eisel, Operer, Reindl, Schlegel and Clockher, all on wages at time work. Contract at *St. George*, Högler, Kessler and Clockher. Tributing at the Bagpipes, Koler and Dorer.—£63 10 0.

CALDBECK.—F. Erhart, foreman of mines; S. Mur, foreman of stamp. Reihel, Buechberger, "Lip Mair," Faninger, Ernwalner, H. Erhart, Dorn, Merten, Scheüher, Heisel, Häckl, Schlegel, Reindl. Dorn's wife employed at the stamp, also Cristl Wurden.—£35 4 10.

Net expenses of the term, £456 19 5½.

Loner's London accounts.—Ap. 8, a piece of silver delivered to R. Martin £31 7 9. Paid on Hechstetter's order to Hans Kalmanstatter and Ruprecht Wuertzer £9 12 0, and Paulus Ster £5 10 0, and Ap. 28 to Hans Paintdner £9 8 0; Peter Linsperger 11/- and lent him to leave the country £1. Expenses of the 4 men here for 7 days £1 6 0. Ap. 30, the month's house-keeping; a cart of coals £1 2 6; 500 billets 7/2; maid for shift, shoes and stockings 12/-; the poor, 2/-; 6 lb. candles 1/10½; washing 3/-; mending garden wall 1/4; gardener for doing up garden and for plants £1 2 6; our maid Elizabeth, 20 weeks' wages £1. May 22, Raphael's bill for letters to March 29, £1 10 9; Ap. 8, paid the English post on a letter sent to Antwerp on the 4th, 8d.

[Loner then seems to have been away from London until autumn.]

KESWICK, St. James' Reckoning.—May 29, Robert Dambson, butcher, pays on H. Fletcher's account £3 13 8. Lady K. Ratliff lends us £1 10 0.

July 16. *Meat account:* John Dalston buys for us 3 cows

and 2 sides of beef £8 15 4, and Henry Dawson one cow £2 3 4. *Tallow account* takes the tallow £1 10 8; *Cash account* takes the hides, sold to butcher £1 1 4.

July 24. *Meat account*, paid over from men's board, 1119 lb. beef at 1½d. from the aforesaid cows and 2 sides, £6 19 10½; butcher for killing, 3/8, and Mr. Dalston's servant for bringing them, 1/8.

Christopher Buckle, brewer, year's wages £7 16 0. Peggy Raven, kitchen maid, £1; Cuthbert Fisher, kitchen boy, £1. Our boy Cristel Warnier, a pair hose and shoes, 3/4.

Locksmith for mending the "oven in which one burns water" (still), etc., 3/1. 4 mine-lamps left by men going away 3/6.

Smelters.—T. Wallner, foreman, at 13/-. Staudacher, Stampfer, and Fechtenbach at 9/-. Schrit, Kalcher, Beckh, and Operer at 7/-. Altschmer, caretaker, at 4/-. Edi Gasgel at 3/-. and others.—£29 11 3.

Smiths.—Kolseisen, Ringseisen and Ludwig Staudacher, £8 14 3½.

Building at Smelthouses and Island, and fence round our meadow; W. Prugger, W. Hochholzer, Robert Mor, Robert Hotla, Wm. Westeral.—£7 7 8.

Charcoal used in smelting and pulverising 225 loads at 2/8.

NEWLANDS:—As last term, except that Kalcher, Beckh and Operer are away (at Smelthouses) and Clocker (at Caldbeck), while H. Moser, Dorer, Höglér and Kessler take their places.—£39 15 4.

CALDBECK:—As last term, except that Scheuher, Heisel, Häckl and Reindl are absent, their places being taken by Clocker and Prugger.—£38 8 2.

At the London office, Jörg Közer takes Loner's place, and pays Weitgassner £6 and Hofer £3 for travelling to Germany. The Antwerp carrier, Matthew Papot, is paid for bringing Cristoff Schlegel and Gabriel Mörgel to London £3 8 0. Two new copper-smiths, Bartlme Kornman and Melchior Moser,* stayed at Hari

* This marks the beginning of the new industry of copper-beating at Keswick. Kornman left his wife in Germany. Melchior Moser married at Crosthwaite 1579-80 Alice Bunting of Mure (Moor on Castlerigg) and had children John 1580, Emanuel 1582, Alice 1583 (must have d. young), Susane 1584, Sebastian 1586, Alice 1587-8, Janett 1589, Radigunda 1591 (about this time he removed from Newlands to Keswick Smelting-house), Elioner 1592 (d. 1597-8), and Percival ("Persevell Molkermoser") bur. 1593. Melchior M. was often called (in South German fashion) "Moser Molker," and some of his children are distinguished by the surname Molker. He was bur. Crosthwaite 1597, and his widow 1597-8. The eldest son John of Newlands mar. 1601 Eliz. Wilson. Later on, Hans M. of Braithwaite (probably the same man) and his wife Isabel had children Issabelle 1610, Parsevell 1611, Jennett 1614. His sister Alice mar. 1600 John Harrye of Keswick. Aug. 13, 1592, William M. was bur. Crosthwaite.

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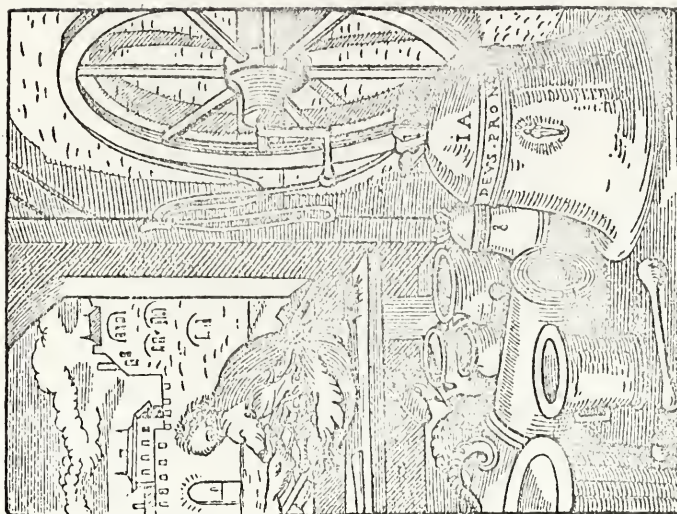
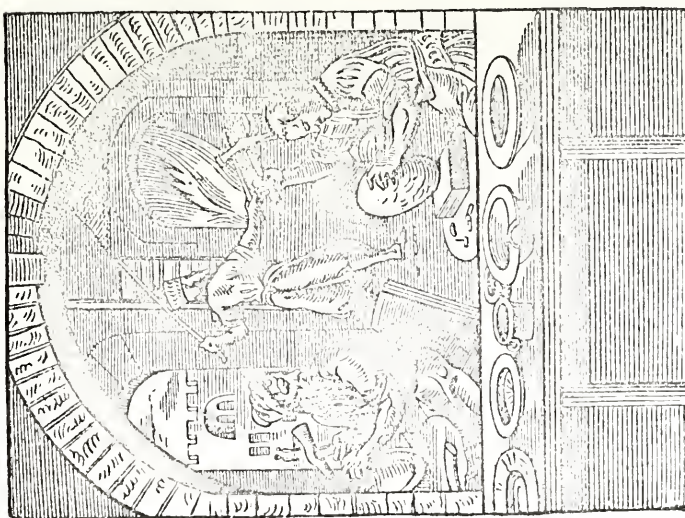
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METAL-BEATERS AND BRONZE-FOUNDER :
after Jost Amman, 1539-1591.



Walter's in London, June 16 to July 17, £3 3 10, and travelled to Keswick £1 10 0.

Közer paid in London to T. Häckl £5 12 0, H. Koller £2 3 0, N. Schram £2, H. Underweger £1 18 0, T. Eisel 12/-, J. Hofer 10/-, E. Weitgassner 9/-, B. Kornman 12/-, and for mending L. Stamler's clock 4/6.

Net expenses for the term, £197 18 11.

KESWICK, *Holy Cross term*.—Közer has paid in London to J. Reihel £4; P. Mair 12/-, Jorg Merten 12/-.

Hans Reinbrun died Aug. 2, in London; wages owing to him £7 10 0.

Mark Steinberger's salary at fl. 180 a year; the last quarter to Sept. 1, 1574, £8 8 9. Richard Ledes' wages, arrears £6 1 7, and for this term, £2 4 2.

Henry Curwen has sold us 6 oxen £28 6 8, 60 bushels wheat £20, 75 bushels malt £18 15 0; 10 cwt. Spanish iron £7 10 0, 6 bushels salt 12/6; 2 cheeses, 72 lb., 9/5; $\frac{1}{2}$ bushel oats 1/4. = £75 14 11, of which he takes in copper £75.

Richard Dudley has sold us a young cow £1 17 7, 6 sheep £1 16 0, 6 bushels wheat £2, 4 bushels malt £3 7 8.

Henry Dawson has sold us 4 cows £8 10 0.

Mylady K. Ratliff has sold us 20 sheep and lambs £2.

George Lamplugh has sold us 6 bushels rye £1 16 0; 3 bushels wheat £1 1 0.

Bought in Keswick market, beef 11/6. Butcher for killing 5 cows and 2 oxen 5/4, and given him for bringing 3 cows from Mr. Dawson 2/-. He took 5 cowhides £1 6 8, and one oxhide 10/-. One oxhide was used in Smelthouses 10/- and 160 lb. tallow from the 5 cows and 2 oxen £2 13 4.

Grasmere.—Edi Watson for caretaking 2/4 (as usual: nothing going on there).

R. Ledes, journeys to Carlisle, Cockermouth and Workington 6/2. D. Hechstetter and 3 others to Carlisle "when the President* was there," 8/10.

Lienhart Diringer has been here 3 years and on Aug. 29 went to Germany; his wages 15/- and parting gift 26/-. Hans Mair working with the cart, 2 weeks at 7/-. Robert Bickland, carter's man at 3/-.

Bartlme Kornman, coppersmith, was engaged at Augsburg May 26, and on coming to England desired that his wife should have 17 batzen a week from his wages.—4/3.

* The President of the Council of the North. The Earl of Sussex held this office 1570-74, followed by the Earl of Huntingdon in 1575.

Smelters.—T. Wallner, Staudacher, Stampfer, Schrit, Kalcher, Operer, Dorer, Nuspaumer: and English labour.—£30 3 11½.

Smiths.—Kolseisen, Ringseisen, L. Standacher; etc.—£8 0 8.

Building.—W. Prugger, H. Mair, Hochholzer. Heuge Gasgel of Penhaus, roofing at the Island.—£6 7 3.

Charcoal from Borrowdale 63 loads, Legberthwaite 1 load.—£7 9 4.

Peat, 1009 loads, £16 16 4.

Ore carried by Margaret Clark from God's Gift to the water-side at Fawepark, 150 kibbles 18/9.

Stonecoal, T. Harison foreman at Bolton mine 4/- a week.

NEWLANDS.—At God's Gift on wages—Häring, B. Moser, L. Prugger, Reindl, Högler, Kessler. Contracts at *Bagpipes*, Högler and Kessler. Tributing at *Bagpipes*, Högler, Kessler and L. Prugger.—£19 4 0.

CALDBECK.—F. Erhart and S. Murr, foremen of mine and stamp; the latter is given 20/- for bringing the stamp to Caldbeck in one week, and for diligence in general; Buechberger, Ernwallner, Dorn, H. Erhart, Clockher, Schlegel, L. Prugger, and F. Dorn's wife. At *St. Emanuel*, Clockher; and at *New Adit*, Schlegel.—£28 14 9.

Net expenses of term, £202 11 9½.

LONDON.—Paid for Keswick, Aug. 21, balance of wages to Hans Stadler £3, Gregory Grasendorffer 13/-, Thomas Heckel 10/-.

House rent, etc., goes on as usual; also a watchman, as is usual, on St. John's night in summer 3/4.

KESWICK: *All Saints' Reckoning*: Sept. 11 to Oct. 30.—The late Hans Reinbrun was indebted to several persons in Keswick, now paid £3 16 0; R. Ledes took some of his clothes in part payment of wages 17/6, and so did L. Stamler £4 4 8; Carl Langnauer bought his pistol £4 4 2.

Anna Eirlin, our cook, wages £2 5 0.

Kornman's wife in Germany £1 9 9; W. Prugger's, £1 6 3.

Grasmere this term, caretaking only, 2/4.

14 oxen and cows for meat £25 13 4. Hari Corwen was paid for 75 bushels malt, but delivered only 60; he owes the balance £3 15 0. We bought wheat from him £3 18 0.

H. Mair, carter, at 7/-. R. Bickland at 3/-.

D. Hechstetter and R. Ledes to see the Bishop at Carlisle 5/2, horse 2/6. H. Mair spent in several journeys to Cockermouth and Workington 13/9. Edi Gasgel travelling on business, 7/4. Peter Kolseisen and Bart. Kornman to Furness "wie sie der Kupfferhämmer dahin gesant worden," 6/-.

THE HISTORY OF THE UNITED STATES OF AMERICA

BY JAMES M. SMITH, LL.D.,
OF THE UNIVERSITY OF CHICAGO,
AND
OF THE AMERICAN ACADEMY OF ARTS AND SCIENCES,
AT CAMBRIDGE, MASSACHUSETTS.

VOLUME I.
FROM THE DISCOVERY OF AMERICA
TO THE END OF THE SEVENTEENTH CENTURY.
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Boy Cristl, shoes and cloth for stockings,* 4/9.

Mending the great timber-saw, etc., 6/-.

Smelting :—Same men ; " old widow Clark " for 66 horseloads of lime, Newlands to Smelthouses 8/3.—£18 5 0. *Smiths* :—Same men, £5 15 7.

Building :—Same men ; new roof to furnace house, etc., £6 7 3. Lady Ratliff sells us 10 ash-trees for building the copper-hammer £1.

Beaten Copper.—Hari Corwen buys 15 lb. weight of pots for his wife, 11/4. A roll of sheet copper given to R. Dudley, 6/-.

NEWLANDS.—Wages at *God's Gift* and *Bagpipes*, £15 0 5.

CALDBECK mine and stamp, £23 4 8½.

Net expenses of term, £110 3 8.

LONDON : Jörg Közer's accounts. For various remedies against the plague 3/- ; to Richard Schnepff in London for keep of Reinbrun's horse 10/4 ; Hari Walton in London for keep of Caspar Faninger and Lip Mair and their wives and children,† £1 12 0 ; Robert Banck in payment of his debt 18/- ; L. Diringer 6/-. " For peat taken to Smelthouses, so that those sent might see the smelting," £2 10 0. S. Nuspaumer travelling to London 10/-. Cristoff Schlegel £2 and Herr Fridrich Schwarz £1. Gabriel Mörgl £4, and Herr F. Schwarz £1.

Herr Schwarz, Közer and others spent at John Clark's in London, also expenses to Mestris Christian and Gregory Weiss, August 2 to 11, after Reinbrun's death, £5 13 0. Carl Langnauer to another landlord, Aug. 2 to 10, 15/-. William Edam in London for Hans Reitter, a smelter, and Merer's son, Aug. 11, 10/9.

Aug. 18, Közer and others with 7 horses to Keswick, 11/5 ; oats and saddles, etc., £2 14 1. Board at Keswick for H. Reiter 18/-.

Sept. 5, Közer and party Keswick to London, including gifts to Hechstetter's children 36/-, £13 11 9 ; horse hire £7. G. Weiss for his trouble in going to Keswick £2. Közer and party spent in London at J. Clark's, Sept. 5 to 13, £7 10 0 ; and London to Antwerp £19 14 7. Sept. 12, lent Hans Reitter £1. End of Közer's reckoning.

KESWICK. *Christmas Reckoning*.—Dec. 25. The rest of Reinbrun's clothes fetched £3 2 8 from which John Wilson's

* Ordinary stockings were not knitted but sewn out of a piece of cloth.

† It appears that these two men were taking their families to Germany for a holiday. They returned and lived long at Keswick. Reinbrun's death seems to have been from plague. All the household had to turn out and find other lodgings.

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and the shoemaker's bills were paid 9/4, leaving a balance of £2 13 4.

Lady Ratliff buys copper pots 6/2, and R. Dudley *ditto* 5/6.

[Usual accounts for malt from R. Dudley, hops from Wilson ; Stup boating beer barrels from the Island, and Bulfell and Gasgel bringing peats there for the brewery ; rents to John Bulfell, Cuthbert Ratliff, Lady Ratliff and J. Fisher in Newlands ; travelling to visit the Bishop, and cost of postage ; servants' wages and clothes as previously ; smelters and smiths, all on a rather reduced scale.]

Ulrich Frass, 1 year's pay £15; Richard Prat *ditto* £20.

Building.—Help to W. Prugger in Isel park and at the Smelters to set up the Copperhammer, R. Schrit, A. Dorer, S. Kalcher and C. Beckh— f_{15} 2 8.

Israel Waltz bought a brass kettle, the earthen one not being serviceable, £1. Hans Merer before leaving Keswick sold clothes, etc., £21 16 0.

Hari Corwen, for his coal-mines, borrowed 2 of our men and 96 lb. of iron tools worth £1.

John Circhs (Church of Worcester), merchant, deceased, owed us on the account for salt £2 4 11, a bad debt.

Melort Hari Scrup Statthalter (Scrope, Lord Warden of the West Marches) at Carlisle owed us on an account for wine a balance of £3 which we could not get ; but he has helped us in many ways, and can be useful still ; so we write off this debt.

D. Hechstetter, in consideration of bad times, and the men's inability to pay, writes off the following to general expenses:—

	£	s.	d.		£	s.	d.
T. Eisel ..	45	1	11	H. Unterweger ..	7	9	4
S. Nuspaumer ..	22	4	4	H. Operer ..	7	6	1
E. Weitgassner ..	19	3	4	B. Fechtenbach ..	3	15	0
N. Schram ..	17	5	3	P. Lindsperger ..	3	1	6
J. Kessler ..	15	3	7	J. Mertten ..	2	15	1
J. Hofer ..	11	18	10	Hans Koller ..	2	3	10
H. Helnstainer ..	10	0	0				
					<hr/>		
					£167	8	1

Thurland and Lamplugh owe us £23 12 6½; Christopher Sandes owes £16 7 2; T. Archer and Anthony Hutson owe £19 14 3.

NEWLANDS, £27 13 4. CALDBECK, £41 19 6.

THE EFFECT OF TEMPERATURE ON THE RATE OF REACTION

The rate of reaction is affected by temperature. As the temperature increases, the rate of reaction increases. This is because the molecules have more energy and move faster, so they collide more often and with more force. This leads to more successful collisions and a faster reaction rate.

For example, if you have a reaction that is slow at room temperature, it will be much faster if you heat it up. This is why many chemical reactions are carried out in a water bath or a furnace.

The effect of temperature on the rate of reaction can be studied by measuring the time it takes for a reaction to complete at different temperatures. This can be done by measuring the volume of gas produced or the change in mass of the reaction mixture.

For example, if you have a reaction that produces a gas, you can measure the volume of gas produced at different temperatures. The volume of gas produced will be greater at higher temperatures, indicating a faster reaction rate.

The effect of temperature on the rate of reaction can also be studied by measuring the change in mass of the reaction mixture. The mass of the reaction mixture will decrease at higher temperatures, indicating a faster reaction rate.

The effect of temperature on the rate of reaction can be studied by measuring the time it takes for a reaction to complete at different temperatures. This can be done by measuring the volume of gas produced or the change in mass of the reaction mixture.

Temperature (°C)	Time (s)	Volume of Gas (cm ³)	Mass (g)
20	120	10	1.0
30	60	20	0.5
40	30	40	0.2
50	15	80	0.1
60	8	160	0.05
70	4	320	0.02
80	2	640	0.01

From the table, it can be seen that the rate of reaction increases with temperature. The time taken for the reaction to complete decreases as the temperature increases. The volume of gas produced and the mass of the reaction mixture also increase with temperature.

H. Merer's salary for the year £28 2 6; he is going in 7 or 8 weeks to Germany,* and his year will be up on May 1, 1575.

Loner's London account.—R. Ledes in 1572 rode to "I.eor-poldt" (? Liverpool) about the debt of Peter du Perrej, on copper at that place. He was arrested on account of his debt, which cost £2 5 8, but would not pay, and this is placed to his account. May 5, 1574, P. du Perrej sends £10 in part payment of his debt.

Net expenses for the term, £405 4 2½.

(Signed) HANNS MERER.

Then follows the "Directory of the district"—first, "Creditores aus dem Gsellenbuch," Dec. 31, 1574, Englishmen and Germans; then "Debitores aus der Knaben Schuldbuch," from the book of workmen's debts, and "Debitores aus dem Newn Gsellenbuch," debtors from the new book of employés. The names of the Germans appear so often in these pages that they need not be given. But as there is another list dated May 26th, 1575, any corrections from the latter, except slight differences in spelling, are given in round brackets. The names in square brackets are the English or modern equivalents. The sums appended to each name are of no importance to local history; the totals in the two lists of English "Creditores" are £1,258 and £1,055 odd, and of "Debitores," £223 and £222.

Creditores :—

Antoni Dottinder of Trilket [Todhunter of Threlkeld].

Arthur Greves.

Anthoni Fischer, Rizart Birckhet, Thomas Hains, Johan Yudal of barradall, etc. [*sic*, expressing a group of carriers acting as a firm].

Antoni Atkinson of Forniss.

Annas Dottinder widow.

Arthur Wilson shopkeeper.

Arthur Damson waller.

Antoni and Robert Griegg (Agriegg) of Gresmer [Grasmere].

Adam Wilumson.

* The endorsement to this part of the accounts notes that he took it with him to Augsburg.

THE SILENT SPEECH

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It is a strange, unexplained phenomenon of
the human mind, that when we are
in the presence of a silent speaker, we
often feel as if we were in conversation with
him. This is not a mere fancy, but a
fact, and it is one that has been
observed by many of the greatest
writers of the world.

There is something in the human mind, that
enables us to understand the silent
language of the eyes, the hands, the feet,
the face, the voice, the body, the soul.
We are not alone in this power, but
we are not alone in this power. We are
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but we are not alone in this power.

Bernhart Penson and Joan [John] Griegg of Longthon [Langdale].

Bernhart Walckher (Wagger) of Kesswickh.

Bege Rebin our maid [Peggy Raven; omitted in second list].

Cristoffer Thwaites of Kesswickh.

Cristoffer Bunting of Būrckhetbanckh [Birkett bank].

Cristoffer Walles [Wallis].

Cristoffer Ritson.

Cristoffer Mayson.

Cristoffer Lancaster of the Greadhowse (Gerthaus).

Cristoffer Lancaster of Walckhthwaith [? Wallthwaite in Mungrisdale].

Cristoffer Tottinder of Weastko (Weska) [Wescow].

Cristoffer Būrckhet and Gawen Judl [Youdall].

Cristoffer Moss of Burckhetmur (Birckhet Meir).

Cristoffer of Schmetwaith [Smaithwaite].

Cristoffer Worn (Wurn) of Wanthwaith [Vale of St. John].

Cristoffer Worn (Wurn) of the Capel [? St. John's].

Cristoffer Antzon (Anson) of Weithbora (Weiborn) [Wythburn].

Cristoffer Buckhel our beer-brewer.

Cristoffer Dawson.

Cristoffer Robinson.

Cristoffer Wurdon.

Cristoffer Boiss (Buess) tailor.

Dickh Studert.

Dickh Gref [Grave's] wife of Keswickh.

Dickh Waterson smith.

Dickh Fleming.

Dickh Nixon.

Dickh Robinson wife.

Edwardt Weildt [Wild] collier.

Edwardt Brownrickh.

Edmundt Jaxson of Gresmer [Grasmere].

Edwardt Stanger of Thorntlwait.

Edwardt Brathwaith of Fornes [Furness].

Elisabeta Bewes (Boues) and Joan [John] Elis wife of Blomlandt [Plumbland].

Ede Watson of Gresmer.

Ede Waterson smith.

Ede Egelsfeldt [Eglesfield].

Ede Aleson and James Bue (the latter crossed out).

Ede Gasgel of Keswickh (omitted).

Gilbert Quarton [Wharton] of Keswickh.

Gawen Mosse.

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Gawen Gref wife of Nadel.
 Guetbert (Cuthbert) Ritzartson of Grisstall [Mungrisdale].
 Gawen Wilson of Espenes (Espens).
 Gawen Greff, Jan Greff and Niclass Castelaw [Castlehow].
 Gawen Bristowe.
 Gawen Judal (Youdal) of Brathwaith.
 Gawen Wilkinson of Fornseit [Fornside].
 Guetbert Fischer our kitchen boy (omitted).
 Gawen Jaxson of Filseidt [Fieldside].
 Gawen Ratteliëff athaunnhet [?] at Townhead] of Keswickh.
 Guetbert Ratteliëff of Kesswickh (omitted).
 Gawen Birckhet of Bortinsgal [Portinscale] (omitted).
 Hari Walckher of Keswickh.
 Hari Fischer of Borradal.
 Hari Fischer of Neulandt.
 Heuge Fischer wife in Neulandt.
 Heuge Fischer in Neulandt in the Lowschnap [Low Snab].
 Hari Atkinson of Keswickh carpenter.
 Heuge and Joan [John] Allenson of Thornthwait (Thornthon).
 Heuge Wudt [Wood] of Thornthwait (Thornthon).
 Heuge and Thomas Hari of Barradal (omitted).
 Hari Hoggart and Wilm Durner (Turner).
 Hari Parccher of Parsnthwait (place omitted).
 Hari Penson of Schmal Zundel [Little Langdale?] (omitted).
 Heuge Watson.
 Heuge Stainger carpenter.
 Heuge Wilckhinson of Kesswickh.
 Heuge Gasgel of Kesswickh.
 Hari Dixon shopkeeper.
 Heuge Studert of Leile* Brethwaith (omitted).
 Humfri Zatwin [?] Hadwin] hatter of Keswickh (omitted).
 Jan Walckher the younger of Legbourthwaith.
 Joan [John] Gaitskart of Nadel.
 Joan Gaitskart of Wanthwayth (of thwamthwaith the younger).
 Joan Gaitskart bailey of Greisstal (Gristal) [Mungrisdale].
 Joan Gaitskart of Grisstal (the younger).
 Joan Gaitskart of Legbourthwait.
 Joan Gaitskart of Smetwaith [Smaithwaite].
 Joan Gaitskart of Brandelholme.
 Joan Wilson of Kesswickh the Lang.
 Joan Wilson the shopkeeper in Keswickh (omitted).

* "Lile Braithwaite" and not "Laal Braithwaite."

Joan Wilson the younger.
 Joan Vischer [Fisher] Gilbanckh [of Gillbank, Newlands].
 Joan Fischer Olivers [son] of Barradal.
 Joan Fischer son of Wilum Fischer of Barradall.
 Joan Fischer of de Low Schnap [Newlands].
 Joan Fischer of Thornthwait.
 Joan Fischer of the Riggs.
 Joan Fischer of Legbourthwait.
 Joan Plack Fischers wife [John "Black" Fisher] in Keswickh.
 Joan Fischer smith's widow in Keswickh.
 Joan Wilson and Gawen Wilson of Barradall.
 Joan Stell of Thornthwait.
 Joan Robinson of Brethwait.
 Joan Prethwaith of Casterigg the younger.
 Joan Prethwaith and Johan Prethwaith of Casterigg.
 Joan Prethwaith son of Thomass Prethwaith of Casterigg.
 Joan Prethwaith son of Meils Prethwaith of Casterigg (omitted).
 Joan Worn of Bürekhethbanckh.
 Joan Worn of Drilket.
 Joan Raue (Raue) of Nadl.
 Joan Raue and Wilum Bürekheth of Thornthwait.
 Joan and Edwardt Ritzen [Ritson] of Sonderhowe (omitted).
 Joan Ritzen of Under Scido or Kesswickh.
 Joan Hodgson of Borns or Holinrodt (Holingrowd).
 Joan Hodgson of Gouess well [Goosewell] the elder.
 Joan Hodgson of Gueswell the younger.
 Joan Atkinson of Materdal the younger.
 Joan Nicolson of Grisstal.
 Joan Wilton of Grisstal.
 Joan Lancaster of Grisstal.
 Joan Wilkinson of Grisstal.
 Joan Wilkinson, Wilum (Joan) Robertson and Edwart Hodgson.
 Joan Wilkinson of Kesswickh.
 Joan Bronrickh (Braunrickh) [Brownrigg] bailey of Materdal.
 Joan Greves of Bornes the elder [Burns].
 Joan Wilkinson of the Hoighrawe (Howg Raw) or Weska.
 Joan Greves (Greff) [Graves] of Casterigg our messenger.
 Joan Greves of Bürekhethbanckh.
 Joan Greves of Schmethwaith [Smaithwaite].
 Joan Greves of Bornes (the younger) [Burns].
 Joan Prethwaith of the Feald of Houeksied [Fieldhead, Hawkshead].
 Joan of de Grinhowe [Greenhow].

- Joan of the Grinhawe of Walckhthwaith.
 Joan Scott of Ridinge [Riddings, Threlkeld].
 Joan Scott of Darrawncaldt (of Thonuel?).
 Joan Scott of Drillket the elder.
 Joan Scott of Wholgill.
 Joan Scott of the Hoighe Rawe [High Row, above Wescow].
 John Scott at Jandar ent [Yonder End].
 John Scott of Braithwaith.
 Joan Langstreet (of Barradal).
 Joan Judal (Yondal) of Barradal.
 Joan Judal and Joan Bürckhet of Barradal [as a firm].
 Joan Bürckhet of Barradl (omitted).
 Joan Bürckhet wife of Portnsgal (omitted).
 Joan Bewe (Bue) of Milhawe.
 Joan Bewe of Kesswickh.
 Joan Bewe of Braithwaith.
 Joan Hütikson of Thornthwait (shoemaker).
 Joan Hütson of the Hoig Rawe (omitted).
 Joan Hütson of Kawgart [Calgarth].
 Joan Dawson of Bürckhetmir [Birkett mire, Threlkeld].
 Joan Rawlandt.
 Joan Brise (Bristo) of the Mairlawse (Morhause) [Mire House, Threlkeld].
 Joan Poner [Bonner] priest.
 Joan Poner Siegel (Sidal) of Neulandt.
 Joan Poner the elder and the younger of Neulandt (omitted).
 Joan Gilbanckh of the Hoig Rlawe.
 Joan Japson [Jobson].
 Joan Clement.
 Joan Tode (Dode).
 Joan Raderei (Roderi).
 Joan Lamert of Barradal.
 Joan Lamert of Kesswickh.
 Joan Lam of Drillket [Lamb of Threlkeld] (omitted).
 Joan Bulfilde [Bulfell] of Kesswickh saddler.
 Joan Walkher of Casterigg (omitted).
 Joan Diffing.
 Joan Normandt.
 Joan Bell.
 Joan Zapson smith.
 Joan Dixon.
 Joan and Robert Crasthwaiht (Crastatt) carpenter.
 Joan Bunting the younger of Casterigge.

Joan Bucklbarr of Kesswickh.
 Joan Hagrigg.
 Joan Wilson of Parsonthwait.
 Joan Bunting of Mor (omitted).
 Joan Studert wife of Neulandt (omitted).
 Joan Liteldel [Littletale] in Neulandt (omitted).
 Joan Barckher [Barker or Parker*] butcher (omitted).
 Joan Bunting wife of Filscad [Fieldside near Smelthouses]
 (omitted).
 Joan Wilmson bailey of Brethwaith.
 Janet Worn.
 Jinkhin Kneip (Knipe) of Forness [? Knipe Ground, Coniston].
 Jemes Clarickh [Clark] and Dickh Fasat [Fawcett].
 Jores [George] Walton, copper-carrier.
 James Rattclieff wife of Kesswickh (omitted).
 Jores Prethwaith [George Braithwaite] of Forniss.
 Lantzlet Richartson of Barradal.
 Lorentz Jackhson of Gristhal.
 Marmaduckh Walckher of Nadal.
 Marmaduckh Walckher of Legbouerthwaith.
 Meils [Miles] Deneson.
 Meils Prethwaith of Cackhawe.
 Meils Fischer miller and Joan Bue (Buess) of Brethwaith.
 Meils of the Howe of Casterigge the younger (omitted).
 Meils Wilson of Kesswickh (omitted).
 Meils of the Howe the elder of Casterigg.
 Meils Birckhet of Kesswickh tailor (omitted).
 Mabel Wilson of Reateurai (omitted).
 Mabel Fisscher widow.
 Margretha Clarickh [Clark] of Neulandt (widow).
 Mathio Scott of Weska [Wescow].
 Martin Moss of Kesswicke (omitted).
 Niclass Fischer the elder of Barradal.
 Niclass Fischer the younger son of Jan Fischer Ölever (olver).
 Niclass Fischer in Neulandt.
 Niclass Stell of Thornthwait.
 Niclass Woode of Thornthwait.
 Niclass Castelhawe.
 Nanni Stocktal our maid.
 Neli Judal [Nelly Youdal] caretaker at Caldbeck mines.

* B and P in these accounts, whether in English names or in German, are used quite indifferently.

THE HISTORY OF THE REFORMATION IN SWITZERLAND

THE HISTORY OF THE REFORMATION IN SWITZERLAND, FROM THE FIRST INTRODUCTION OF THE GOSPEL OF CHRIST, TO THE PRESENT STATE OF THE CHURCHES, AND THE CONDUCT OF THE REFORMERS, IN THE SEVENTEENTH CENTURY. BY JOHN CALVIN, BISHOP OF NICHOLAI, AND OF THE UNIVERSITY OF WITTOBACH. TRANSLATED FROM THE FRENCH, BY JAMES CALVIN, BISHOP OF NICHOLAI, AND OF THE UNIVERSITY OF WITTOBACH. IN TWO VOLUMES. THE FIRST VOLUME. LONDON, PRINTED BY J. B. ALLEN, IN THE STRAND, NEAR ST. MARTIN'S CHURCH, 1784.

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- Petter Wilmson and Joan Richtartson of Barradl (last name omitted).
Petter Pristawe [Bristowe] of Grisstal.
Petter Wilmson of Kesswickh.
Petter Worn.
Petter Normandt (omitted).
Parseval Rattclieff bailey of Kesswickh.
Parseval Wodt [Wood] carpenter of Keswickh.
Parseval Athaw smith.
Robert Greves of Nadel the elder and the younger.
Robert Greves of Schonderhawe (Sonderhawe) [Shundraw] and Christoffer Moss.
Robert Greves (Greff) of Bornes.
Robert of the Riggess.
Robert Dawsat (Dauset, tailor) [? Towcet].
Robert Allanson.
Robert Wilkinson of Gristal.
Robert Bell.
Robert Hutson of Drilkat (Threlkeld).
Robert Stanger.
Robert and Edmond Watson.
Robert Mosse of Thornthwait.
Robert Hutkison of Thornthwait.
Robert Crosthwaith.
Robert Worn of Wanthwait the elder and the younger.
Robert Todinder.
Robert Banckh of Kesswickh.
Robert Hodgson of the Kausefocta [Causeway foot, Naddale].
Robert Bickhlandt of Kesswickh.
Robert Mor waller (omitted).
Robert Bunting of Casterigg.
Robert Hatle [? Hadley].
Robert Flettscher of Kesswickh.
Robert Damson butcher (omitted).
Robert Nicolson.
Robert Siton [Seaton] of Grastockh (omitted).
Robert Braun wife.
Ritzart Butermair.
Sir Ritzart Bärekheth parson.
Ritzart Scott of Weastekac (Weska) [Wescow].
Ritzart Hütson of Drilket [Threlkeld].
Ritzart Wainwrigth.
Ritzart Bonner (omitted).

General principles

10

1. All human beings are born free and equal in dignity and rights.

Article 1

2. No one may be subjected to slavery or servitude.

Article 2

3. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 3

4. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 4

5. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 5

6. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 6

7. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 7

8. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 8

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Article 9

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Article 14

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Article 15

16. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 16

17. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 17

18. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 18

19. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 19

20. No one may be held in slavery or servitude; slavery or the trade in slaves is prohibited in all its forms.

Article 20

21. No one may be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

Article 21

- Ritzart Fischer of Brandelwa [Brandelhow] (omitted).
 Ritzart Bristaw of Kesswickh (omitted).
 Rogier Clärckh (Clarickh) of Drilkat [Threlkeld].
 Rolandt and Joan Dackhery (Dockeri) [Dockwray].
 Steffan Boesser (Bosser) waller.
 Simon Scott of Kattbeckh [Caldbeck].
 Tomas Barchher of Barnsnthat (Parnthon) [? Branthwaite, Caldbeck].
 Tomas Read and brothers of Casterigg (Reved).
 Tomas Harison foreman at Bolton.
 Tomas and Joan Wilmson.
 Tomas Gaitskart of Grisdal.
 Tomas Scott of Bürkhet fealde [Birkett field, east of Threlkeld].
 Tomas Scott carpenter.
 Tomas Flettscher of Neulandt.
 Tomas Flettscher of Kattbeckh [Caldbeck].
 Tomas Hutson khnecht [workman] in Neulandt.
 Tomas Boner of Neuland.
 Tomas Bulli [Bewley] of Neuland.
 Tomas Hains of Barradal.
 Tomas Kannan, Cristoffer and Ritzart Hutson.
 Tomas and Christoffer Lancaster of Materdal.
 Tomas Walckher of Thornthwaite.
 Tomas Stanger of Brethwait.
 Tomas Thomson of Kockhermut [Cockermouth].
 Tomas Banckh of Casterigg.
 Tomas Clärckh (Larickh) of Neuland.
 Tomas Bresbi slater.
 Tomas Oliver of Kesswickh (omitted).
 Tomas Nicolson of Barradal.
 Tomas Wolson of Kesswickh glover (omitted).
 Tobe Bewe (Bue).
 Wulum Fischer Gilbanckh [of Gillbank in Newlands].
 Wulum Studert of Litelthon [Littleton in Newlands] (omitted).
 Wulum Studert of Stainekrafft (Stonycroft in Newlands] (omitted).
 Wulum Fischer the wabster of Thornthwait.
 Wulum Fischer and Wulum Hodgson of Thornthwait.
 Wulum Gaitscart of the Wanthwaith [Vale of St. John].
 Wulum Allenson.
 Wulum Scott of Bürkhetfilde [east of Threlkeld].
 Wulum Scott of the Hoig Rawe the elder.
 Wulum Scott son of Gawen.
 Wulum Bennet vicar [of Crosthwaite] (omitted).

- Wilum Thwaites of Thornthwaite.
 Wilum son of Joan Thwaites of Neuland.
 Wilum Fischer carpenter.
 Wilum Walckher of Thornwaite.
 Wilum Spenser.
 Wilum Thowson (Dauson) of Kesskedel [Keskadale in Newlands].
 Wilum Liese of Thornthor [Thornthwaite] (omitted).
 Wilum Grienop of Kesswickh.
 Wilum Westeral of Kesswickh.
 Wilum Dodgson of Forniss.
 Wilum Barnskal wife of Casterigg.
 Wilum Thomson, Mr. Wilum Musgraf servant.
 Wilum of the Hawe of Casterigg (omitted).
 Wilum Stob.
 Wilum Man.
 Wilum Cariss (Cariuss).
 Wilum Bawe (Bue).
 Wilum Gasgel of Kesswickh (omitted).
 Wilum Dixson of Scelton [Skelton].
 Wilum Wiethe of Kesswickh (omitted).
 Wilum Schnadel (omitted).
 Martin Burenget [Burngate].
 Jores [George] Fischer of Neulandt.
 Petter Schmid [Smith].
 Joan Studert of Scoreng (omitted).
 Janet Edwardt Bulfilde widow [sic] of Kesswickh (omitted).
 James Bule of Kesswickh.
 Jores Athaw of Kesswickh (omitted).
 Tomas Bulfilde of Kesswickh (omitted).
 Antoni Dellouer of Hüntertal (Deller of Hünertall) [? Ennerdale].
 Wilum Fischer of Wiborn [Wythburn] near Gresswickh [? Grasmere].
 Mabel Ritzen [Ritson] widow of Under Scido.
 Johan Ritson of Bolton (omitted).
 John Harison of Bolton (omitted).
 Steffan Bell (omitted).
 Tomas Barn of Bolton (omitted).
 (Wilum Scott of Bortnscale).
 (Cristoffer Hodgson the younger).
 (Humfri Bolswordt) [charcoal-burner from Cannock].
 (James Dickhison).
 (Meils Wilson of Kesswickhe).
 (Meils of the Haw of Castrigg the younger).

Also added later :—

Johan Stanger.

Johan Aldersee.

Debitores :—

Huge and Thomas Hary of Barradal (omitted).
 Joan Fischer son of Wilum Fischer of Barradal.
 Rowlandt Phillipson [of Calgarth].
 Cristoffer Sandes [of Graythwaite, brother of Archbishop Sandys].
 Thomas Artzer [Archer] and Antoni Hutson [Hudson].
 Thomas Turlandt and Jores Lamplaw.
 Edwardt Walckher Joan Fischer etc. [=and partners] (omitted).
 Thomas Mackerel smith.
 Joan Grickh (Beckh) of Crosthwait.
 Cristoffer Rieggs and Edmund Hodgson.
 Georg Mackherel of Hockhseid (Hawgseide) [Hawkshead].
 Joan Gaitskart of Wanthwait the elder.
 Edwardt Wilmson of Milbeckh [Milbeck under Skiddaw].
 Parseval Woodt of Kesswickh deier (? dyer).
 Joan Fischer bailey of Barradal.
 Edwardt Wilson of Weibora [Wythburn].
 Edwardt Wilson of Legborthwaith.
 Rowlandt Walckher (Wagger) [Walker] of Grisdal and Jeorg Rigge.
 Lenart Prathwaith of Hockhsead (Hawkseit).
 Rowlandt Damson of Gresmer.
 Robert Sarra [? Sawrey] etc..
 Peter Nücolson of Circklei (Aklei) etc.
 Lenart Kneip.
 Thomas Goesling of Ridgelai [Rugeley, Staffs., a charcoal burner].
 Niclas Praun (Brown) collier [from Madeley].
 Ritzart Bürckhet and Cristoffer Nicolson.
 Joan Jotier (Gottier) [? Goodyear] of Fanute (Fundt) [a charcoal burner from Cannock or Shropshire].
 Georg Hassel [charcoal-burner from Cannock].
 Wilum Heapwod [charcoal-burner from Cannock].
 Edwardt Raulinson.
 Hainrich Lockher.
 Rogier Inginthwaith.
 Roulandt Gselton of Ugtherbi [? Skelton of Oughterby].
 Mathio Hodge of Bolton.
 Niclass Man.
 Joan Sandes of Graithwaith [a John Sands was buried at Hawkshead 1591; not otherwise known].
 Cristoffer Boiss of Thornthwait.

Lorentz Brethwait of the Brothel [Brathay] in Hockshede.
 Cristoffer Banckh of Conistone [? Bank Ground].
 Rogier and Simon Sandes.
 Wilum Griegg of Gresmer.
 Niclass Hodgeson of Gusewel.
 Rober Kncip of Forniss.
 Jems (Hue) Standle [Stanley] of Kesswickh.
 Parsevol Worn and Robert Dathwaith (omitted).
 Robert Karter of Bottel (Botthil) [Bothel].
 Wilum Jefrei and Gawen Yudal.
 Meils of Sarraw [? Sawrey].
 Meils Dickhenson.
 Wilum Wieth (Witte) of Ysel.
 Ritzart Yudal of Crosthwaith.
 Robert Grefs of Weiborn [Greaves of Wythburn].
 Michel Buel (Bull) and Georg Ralff (Relff) of Kadbeckh.
 Georg Hue (Hewe) of Casterich [Castlerigg].
 Wilum Dabson of Ysel.
 Joan Wilckhinson of Seatmird' [Setmurthy].
 Joan Scott of Cealbeckh (Kattbeckh) [Caldbeck].
 Wilum Barraowskall.
 Georg Scott of Wodhal [Woodhall, Hesket Newmarket].
 Wilum Fischer of Emelseid [Ambleside].
 Thomas Ritzartson of Brongthon [Broughton on Derwent].
 Joan Melfelde of Longthon [Mealfell or Milfull of Langdale].
 Joan Fischer and Joan Yudal.
 Edwardt Judal, Wilum Elles (Eliss) etc.
 Thomas and Joan Beil (Bell).
 Joan Person and Joan Stanger.
 Hari Prethwaith (tailor) of Kesswickh.
 Cristoffer Mayson of Gresmer.
 Ritzart Arras collier [from the Forest of Wyre].
 (Edward Walckher of Legborthwaith).
 (Wilum Beckh our host at Worckhingthon).
 (Wilum Fleming) [of Rydal and Coniston].
 (Hari Barckh [Park] Mr. Fleming's bailey).
 (Thomas Bauman, foreman coal-miner).
 (Wilum Scott of Būrckhet vildt) [Birkett field, Threlkeld].
 (Joan Stanger forester).

Among the papers of Haug & Co. is a letter from the Archduke Charles of Austria, signed with his autograph "Carolus," and countersigned by various officials. It

1. The first of these is the fact that the system is not a simple one, but a complex one, involving many different factors, and it is not possible to give a simple answer to the question of what is the best system to use.
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is addressed outside to "Our dearly beloved David Haug, Hans Lanngenauer and Co. in Augsburg," and dated from Grätz, November 21st, 1574. By the endorsement it was received December 3rd. The seal is rather interesting; red wax has been put between the flap and the paper, but not over the flap, which is embossed by the seal. It bears a coat of arms of many quarterings surrounded with the lettering "Carl v. Gotes Genaden Erzherzog v. Ostereich." The letter expresses great friendliness to Langnauer; it relates to quicksilver mines in Idria and metallurgy in Venice, but has no bearing on the English business, beyond showing that in spite of their losses at Keswick the firm was still flourishing.

. COPPERSMITHS AT KESWICK, 1575.

HANS MERER, the German clerk, having now gone back to Augsburg, the *Keswick Journal* is kept by Ulrich Frass, and each term's accounts for the rest of our period are signed by him. The chief interest of this year is the development of copper-smiths' work—the making of kettles, pots and pans lately begun at Keswick. This was a sensible and business-like movement, in view of the difficulties, already noticed, in the way of disposing of the copper.

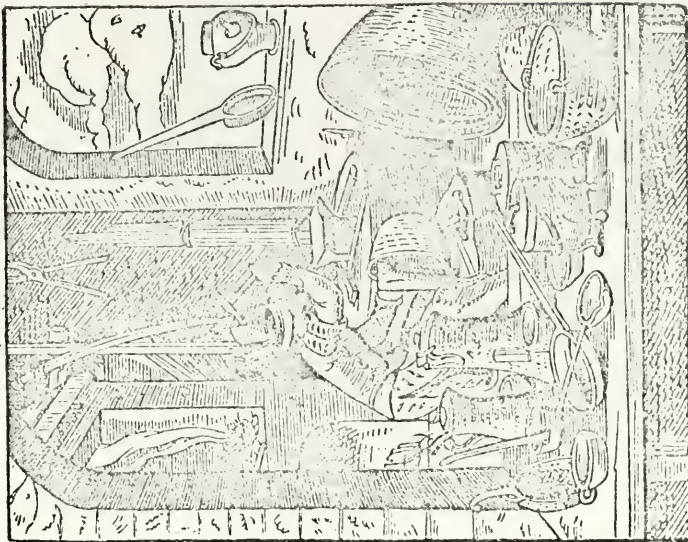
A number of skilled men were imported, including two who left their names to families well known in local history. One of these, who came about Easter, 1575, was Conrad Zinnagel*; his descendants corrupted the name to Zinogle and Senogles; in the last form it still survives in the district. The other, who came early in 1576, was Hans Rössle, Englished as Raisley; his representative in the eighteenth century was mother to Raisley Calvert, whose bequest enabled Wordsworth to devote his time to poetry. Beside these, few if any of the names of German colonists can be said to survive. We see from

* Conrad Zinnagel married Margaret Atkinson of Keswick 1579, and had children Sebastian 1582, Alice 1583. Percival Senogle and Mary his wife, of Orthwaite, bapt. Joane 1605; Percival and Mary S. of Munkhall, bapt. Sebastian 1606, who in 1636 mar. Marian Nicholson of Crosthwaite, and had children Sebastian, John, Robert, Margaret. Joseph Sebastian Senogle mar. Jane Clark, at Grasmere, 1762. Hans Rössle married Janet Maison (Mason or Mayson) at Crosthwaite 1577, and had children Lilint 1581, (John ?) Alice 1586, Daniel 1588, Stephen 1594 (by which time the family were of Windie Brow, their home until Raisley Calvert's time), George 1596, and another (? William) 1599. "Hansle" R. of Windebrow was bur. 1599. John or Hans R. junior of Windebrow mar. 1603, Anne Raven of Thornthwaite, and had children Anne 1610, David 1612. Nicholas R. of Windebrow mar. 1621, at Hawkshead, Agnes Kirkby of Coniston, and had twins John and Agnes, bapt. Crosthwaite 1622. Isabel Relsle died at Near Sawrey 1663 (Hawkshead Reg.).

these accounts that there was an English Cariss or Carus in the employ of the Company, as well as the German Carius, and indeed Carus or Carehouse was a name known in Westmorland for many generations before the Germans came; Becks and Stampers were already at Keswick before Christian Böckh and Ulrich Stampffer arrived; Moser or Mosser may be from Cumberland and Westmorland place-names, though there were three German Mosers in the colony; others, like Parker (for Berger), Myre (for Mair), Smith (for Schmidt), soon became indistinguishable, and it is extremely difficult to disentangle the pedigrees of the villages and hamlets by merely consulting the Registers. But it is pretty certain that the German blood was widely intermixed by marriage with the dalesfolk, and it is possible that some of the energy and intelligence for which the "old stocks" were remarkable was owed, in a measure, to this crossing with a new strain.

The coppersmiths' industry appears to have given a fresh impulse to the business, bringing custom from all sorts of people in the district as well as in London. It is also interesting to us as introducing an artistic craft into the dales; for one cannot look at Jost Amman's pictures (next page) without realizing that the copperbeater, if he only made jugs and dishes, was an artist. And if the engraving is a little weak in its perspective, it is obviously true to the details as we find them in the accounts—from the timbered workshop to the tools on the bench, and from the furnace with its bellows to the quaint and pretty display of assorted goods on the counter.

Keswick, Feb. 4, 1575.—Groceries from London—sugarloaf 16½ lb. at 12d., 16/9; ¼ cwt. plums, 6/-; ¼ cwt. rice, 6/8; ½ cwt. raisins, 5/3; ⅓ cwt. figs, 3/6; 7 lb. almonds, 5/10; 3 lb. pepper, 8/-; 2 lb. ginger, 5/4; 6 lb. large raisins, 2/-; ¼ lb. cloves, 1/10; ½ lb. cinnamon, 3/-; ¼ lb. saffron, 5/6; ¼ lb. nutmegs, 2/-; 1 barrel olive oil, 16/8; 1 barrel soap, 13/-. Seeds, 12/4. ½



COPPERSMITHS : after Jost Amman, 1539-1591.

bushel pease, 1/8; 4 oz. petroleum ("olium peterolinum"), 2/-. 2 baskets and locks for the groceries, 2/11; a bag for the pease and 1½ ell cord, 1/7; carriage (to the carrier's inn), 8d.; and London to Keswick, 278 lb. at 1d., £1 4 9.

London.—F. Schwarz spent for Keswick, letters £4 17 3. Self to court and Jorg Kessler travelling £3 10 0. Expenses for the late Hans Reinbrun, apothecary, 10/-; doctor (Dockhter) 6/-; maid nursing him 10/-; linen for burial 9/2; given to the poor 1/-. Money drawn out by workmen passing through London; Schleucher £5 10 0, Stadler £1 10 0, Grosendorffer £1 10 0, Heisel £1 15 0, Hackhel £1 10 0, Fanginger 11/-, Kessler, £3, Ringsseisen £6 4 4. Expenses of L. S. Stamler and H. Merer, Keswick to Augsburg £16. Bought in London 2 cwt. Styrian steel £3 2 0, carriage to Keswick 15/3. Lady Catherine Radcliffe's servant Cuthbert Widtvil in London received from H. Loner £3, to be repaid at Keswick.

Keswick.—[Usual items of housekeeping, travelling, etc.]

Horses.—S. Kalcher, carter, at 7/- a week; R. Bickland at 3/-.

Housekeeping, additional account.—26 lb. candles 8/8, 13 lb. soap 2/6, 1 bushel kelp and cord for a bedstead 2/-, letter 6d., the cooper 2/4; the couple married at Candlemas 1/-, locksmith mending sundries 1/4; 1½ quart Spanish wine 3/1. Sir Richard the parson, new year, 5/-. Breaking the ice round our island 1/6. Bellows in R. Ledes's room 1/6. R. Ledes for getting £100 in cash from Mr. Braddyll 3/-. Milord Bishop's servant 1/-, etc.

Smelting.—T. Wallner, foreman, at 13/6; Stampfer and Staudacher at 9/-, Altschmer at 4/- a week and L. Staudacher at 6d. a day.

Coppersmiths.—B. Kornman at 9/-, Melchior Moser at 5/-.

Smiths.—Kolseisen at 10/-, and others as before.

Building.—W. Prugger at 9/9; S. Mur and R. Schrid at 8/-; A. Torer, H. Mayr and C. Beckh at 7/-.

Building the Coppersmiths' workshop.—(The specification). A house for a "copper-hammer," to be 39 feet long and 27 feet broad inside measurement, and 17 feet high from the ground to the highest part of the roof tree, and the two end walls (abseiten) to be walled up to the ridge (fürst): in such house they shall also make "ain Giess und ain Schund ess" (? drain and rubbish shoot); moreover they shall build a wall in front of the house of a rod in length. All the stone walling to be a yard thick, and built with lime and sand; also roughcast within and without the house; all work, such as carriage, sand,

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lime, stone and the like at their own cost. R. Mor, waller, contract £20; digging foundations £1. Robert and Anthony Griegg, to win, lead and work 4 rods slate, £3 8 0. Carpenters' work by J. Crastall, W. Fischer, N. Wudt, T. Scott, R. Crastatt and J. Wudt, £6 9 10. Carrying wood from Isel park and Mr. Dalston ground £7 4 0.

NEWLANDS.—Hering, foreman, at 20/-. B. Moser, H. Moser, L. Prugger, A. Reindel, M. Ernwallner on time-work. At the *Bagpipes*, G. Hegler and F. Wallner.—£19 11 4.

CALDBECK.—F. Erhart, foreman, at 10/- with H. Erhart and P. Mayr at wages—£4 0 6. J. Dixen, W. Carius, P. Schmid and Adam Willumson, English workmen, at 6d. a day. Care-taker at 1/- a week. Contract at St. Emanuel, H. Ernwallner. Tributing at the *Rider*, C. Klockher, U. Schlegel, S. Buchberger, F. Dorn.—£41 11 7½.

Net expenses of Shrovetide term £209 8 2½.

KESWICK, March 5.—Sir Hari Corwen lent us £5. Richard Ledes came into the service of the Company Feb. 3, 1569, and his pay now amounts to £125. His expenses Jan. 28 with Mr. Braddyll to Kendal 3/2; Feb. 6 to Kendal to get £70, 3/3; Feb. 12 with John Grave to Whalley to Mr. Aston with the warrant £1 7 6; Feb. 28 to York to the President £1 12 7; March 12 to Whalley to Mr. Braddyll £1 8 0; a man riding with him 3 days 3/4; shoeing 1/2; poor boy carrying a letter 6d.; a girth 1/4; spent at Cockermouth 6d.

H. Loner sold the horses ridden to London by Merer and Stamler for £2 and £2 13 0.

Queen Elizabeth paid E. Braddyll for 500 cwt. copper £1100. H. Mayr on leaving deposits £11, and F. Doren £8.

Given to a farmer of Caldbeck who informed about other farmers who had carried off iron etc. from the stamp there 2/4.

Bringing a saddle from Kendal 6d. Mending our little boat, and pitch and tar for it 14/3.

New Year's gifts delayed through want of cash:—P. Rattclieff bailey 10/-, Ulrich Frass' wife 5/-, 3 maids in the house 6/-, 3 boys in the house 5/-, Brewer and his maid 4/-, etc.

Mrs. Hechstetter's account—Candles 12/4, great wooden trencher 8d.; 6 lb. soap for the carter to grease the cart with, and 26 lb. for washing, 5/4. Altschmer's wife, earnest money, 1/6. Etc.

John Grave, our messenger, sent to London for a warrant [to receive the price of copper from the Queen?] and thence to York and to Lancashire to Mr. Braddyll for the money £2 3 9;

and spent in London 12/-; for his horse 11/5, and shoeing 2/-.

Anna Eirlin our cook £1 2 6. Urschel[Ursula] Machenschelckin, our former maid, for 3½ years, £4 17 6.

Smelting (same staff) £22 11 7. *Smiths* (same) £6 1 1.

Building at the Coppersmiths' shop, W. Prugger, S. Mur, T. Harison; also Richart Hemer, carriage of 2 fother wood from Isel park to Skilbeckh 5/—£6 17 7. For "Zapfen" (pegs or taps?) and the great ring for the waterwheel axle, etc., £11 8 4. At Caldbeck, 22 lb. iron for scrapers and "handhab" (? hand holds) and 13 lb. for the sieve 7/3½; 200 nails 2/8; smith 1/5.

Horses.—For the Coppersmiths' shop, man with horses, 12 days leading wood Isel park to Smelthouses at 6/- a day; 5 days at 6/- carrying 2 tons iron from Workington. 34 loads of beer to Caldbeck and bringing back empty barrels 17/-; 18 loads beer from Midingstett to Smelthouses and masters' house 9/-. Lime ditto 6/-.

NEWLANDS (as before) £19 6 8. Caldbeck (as before) £31 17 0½.

Mine-lamp returned by U. Schlegel 1/-.

Tallow used at Newlands, 84 lb.; at Caldbeck 80 lb. at 4d.

Lady Rattelleff has let us for a year the upper meadow called Hetsmeir and the meadow in the upper wood; also beyond the meadows both Bells* (Bill) £5.

Friderich Schwartz paid in London to S. Nuspaumer, on his way to Germany, 11/-.

LONDON, March 31.—F. Schwarz owes to H. Loner for board £5 12 0 and pays £1. Loner paid to H. Merer on a note from D. Hechstetter £4 6 8; to Franz Dorn £1 15 0. Hans Mor [Mair], miner, £4 6 8.

Net expenses of Easter term £257 18 9½.

April (L.)—Ap. 15, Copper pots sold £6 16 6, and copper £6 8 1. Richard Stenaus, coppersmith, for a sample and kettles delivered some time ago £1 18 0. L. S. Stamler's and H. Merer's valises, carriage from Keswick to London, 10/-. Expenses of three coppersmiths, travelling from Augsburg to Köllen (Cöln), Antwerp and London, £8 12 6, and to Keswick £2 10 0. J. Stautacher and A. Torer going to Germany drew out £2. L. S. Stamler has been in the service of the Company from 1566 to the end of March 1575 at £10 a year, £90. H. Merer's wages not yet paid £93 15 0. Interest on Mark Steinberger's £101 5 0 invested

* The Bell, now an intake, is 200 yards south of Rakefoot. Headsmire may be the ground above Causeway Head.

in the Company's business £12 3 0; on April 30 1575 he drew out £50.

(K.)—Old carthorse sold to Chris. Mayson, he to work out the value, £1 13 4. R. Ledes, April 9, to York with the bailiff of Gristal £1 17 11, and gave the President's secretary for services rendered 14/-, also twice to Carlisle for bringing together the Commissioners in the matter of the [Earl of Northumberland's ?] wood at Fawepark (Vorbarekh), 6/4.

John Brownrigg, bailiff of Matterdale, for his lord's peat-ground called Karl Moss, from which in 3 years (1571-74) the farmers stacked and led 43,400 loads of peat, at 1/- the thousand £2 3 4.

D. Hechstetter and R. Ledes to Carlisle 2/-; letter to the Bishop 1/-; letter from London 1/4; another to the Bishop 6d.; gave on staying a night with him 1/-; a summons (Zitier Brieff) to Bewley 1/6. Letter to Kendal 6d.; from London 6d. John Grave, 9 days at 15d., to York with letter to Mylord President about wood in Fawepark 11/3; also to Cockermouth, Penrith, etc., 2/-.

Workman clearing bramble thickets from our meadows, and cleaning up the Island, 14 days at 6d.

Mrs. Hechstetter for housekeeping this term £19 17 0, and extras beyond estimate £2 6 7.

Given to the Bishop of Carlisle, a copper girdle (girdtl) whercon bread is baked 6/8.

Plants and straw for garden 2/9; gardener, 6 days on the Island 1/-. A milch cow in the masters' house £2 5 0. Linen for shirts for two boys in the house 7/6; pair hose for boy in the buttery (Buteri) 2/6.

Smelting.—£14 11 4. *Smiths.*—£8 7 2.

Coppersmiths.—B. Kornman at 9/-; Casfer Strauss, Sebastian Schweitzer and Conrad Zinnagel, each 5/8; Melcher Moser at 5/-.

Building.—Same men; 225 loads of herbage to plug the watercourses at 4d. for 5 loads. 4000 slates from Under-Skiddaw £1 16 0, etc., £13 8 11.

Newlands.—£18 8 3. *Caldbeck.*—£28 17 2.

Net expenses of Whitsuntide term £287 1 7.

May (K.)—Wages to Chris. Buckheli, brewer, £3 18 0; Nane Stockhtal, brewer's maid $\frac{1}{2}$ year with keep, £2 12 0. Bege (Peggy) Raven, kitchenmaid, 1 year, £1; Cuthbert Fisher, kitchenboy £1 10 0.

The five coppersmiths living in the masters' house are charged with keep at 3/- a week each. Copper pots for masters' house £1.

Bought 8 cows and 2 oxen from J. Wilumson £19 10 0; he agrees that any we do not now kill shall stay on his fields till Michaelmas.

John Grave again to York to see the President about wood in Fawe park 8/9. Horses when Hechstetter, Ledes and Grave went to York 5/10; girth 1/-. Grave to London with Hechstetter £2.

Mowing our meadow Hetsmeir 6/8; making and leading hay £1 0 9. Mowing the Island 3/- and 3 pair hay ropes 6d.

Bulfeldt, saddler, for saddles, bridles and cart-harness 10/3. Pitch for pitching leather bottles 3d. Carriage of copper pots to Kendal 3d.

H. Hering on his wedding* 15/-.

Emptying and cleaning the well on the Island 6/8.

Israel Waltz, medical attendance on the kitchen boy in illness 10/-.

Man sent to Carlisle for train-oil, but none could be got, 2/10.

Hari Maison for bringing letters and money from London 2/-, and taking a letter to Sheffield (Schiffveldt) to Thomas Wallner, † to be personally delivered, 8d. T. Wallner and T. Ried, smelters, to Mr. Humfrey at Sheffield, to see his lead-smelting £2 6 8.

Hechstetter took to London 30 lb. copper pots when he went there to see processes of copper-working, and presented these to the master's and men £1 5 0.

Mrs. Hechstetter, 2 pair shoes for boy in the house 2/- and a jacket and 2 shirts 4/11. Candles 2/1. Bone spoons for the kitchen 8d. Canvas for packing copper pots above mentioned 6d. Milk pail 5d. Linen for table napkins 4/2. 2 glass bottles 1/5. 19 lb. old tin pots exchanged 3/4, etc. The buttermaid and milkmaid on church dedication day each 1/-. Wooden utensils in kitchen 2/7. Wicker cage for pigeons at the Island 1/4. Cleaning out well in the house 10d. 5 earthen pitchers 7d.

D. Hechstetter gave at York to Lord President's secretary 8/-. Carriage of 25 lb. copper pots to London 2/1. Ream of paper 6/-. Given to Mr. Humfrey's smelter at Sheffield 4/-. 4 dozen wooden platters 2/-. Lord Treasurer's secretary £2.

Hechstetter and 2 others to York £1 9 0, and spent at York 17/-, thence to London £2 2 0; keep of horses at the Windmill 34 days £1 1 8; bed and room 37 nights 12/4. Wm. Prat going

* He married, May 29th, 1575, Janet Studdert, of Rogersyde.

† Foreman smelter, who seems to have been visiting Sheffield to see Humfrey's smelt works.

to court with letter for Lord Treasurer £1 15 0, and horse 10/-. Gregory Weiss to court, hire of horse, etc. 5/9. London to Sheffield to see Mr. Humphri's smelt works £3 1 0, and home £1 8 0.

For the late Hans Reinbrun, paid to his shoemaker in London 7/6.

T. Wallner, expenses to Sheffield £2.

For H. Hering, paid to his daughter in London £1.

D. Hechstetter writes off the debts of the following, as they have done extra work and have not run deeper into debt—Philip Mayr £21 14 0, Caspar Fanginger £27 3 5, and Andre Torer £28 17 0.

Smelting.—Including 60 besoms 1/9—£29 16 11.

Smithy—£9 4 1. *Coppersmiths*—£14 0 8.

Building.—Roof to Coppersmiths' shop; the locksmith for making 7 small "Naiger," one great "Ziegel" and a wood "feil" (? file, wedge or perhaps bolt?) in the timber sheds 1/9; carriage of 30 young oaks by water from Widob (Wythop) to Parsnthon, etc.—£25 17 0.

NEWLANDS.—£8 15 4.

CALDBECK.—At a new working called the Luck (Glück), Klocker, Schlegel, Buchberger, and B. Mosser, tributers, have turned out 22 kibbles of massy lead ore (ganz blei Stueff) and 162 kibbles of granulated (keren); also 17 k. massy copper ore and 746 k. Kolbenpruch.—£23 17 0; for unsorted ore they are paid £15; less deductions £30, = £8 17 0. Total expenses at Caldbeck £43 5 0³.

Net expenses of St. James' term £373 4 2³.

May 21 (L.)—Alderman Duckett sold to the Muscovite Company 31 cwt. copper at £3. He puts down that he has paid the servant of the Master of the Requests 11/-, and has paid to one Khandel what the Company gave on account of wood from Ireland £2. About these expenses, I—Hans Loner—know nothing; it has been done without my knowledge and consent. Writing a letter to clear up matters between us and William Humfrey 6/8.

June 21, Loner paid out for Keswick.—Hechstetter's two maids, travelling £4. Bear skin belonging to a miner, to be refunded, 6/-. Jacob [sic] Staudacher travelling £2. Letters 4/-. Advocate in Richard Dudley's suit about the wine 10/-. Notary for copy of a "Procura" sent to Augsburg and ditto to Rouen (Roan) 9/-. Raphael, postmaster, 31 letters from Antwerp, 15/6; D. Hechstetter and man when he stayed with me 35 days, and Ulrich Heiss several days £5 5 0. Paper, wax, etc., 6/-. Freight of wrought copper from Keswick £4 3 6.

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Richard Prat, payments made by him and part wages £8 14 0. Chris. Lancaster's account, not included in his bill (Zettel) 10/-. Wrought copper sold to Mr. Modli (? Motley) coppersmith £11 8 11.

August (K.)—Bege Raven 4/4½; Cuthbert Fischer 4/1; Cristoffer Warner, boy in the house, has been 8 years in service and useful in all sorts of ways, and nothing more than clothes have been given him: £2. The poor kitchen boy Thomas, 9 years in the masters' house, a poor creature who for his health's sake works indoors (zue kamer), partly for his time and partly in charity £2 10 0. Nursing the sick boy Thomas 1/-.
 Ten great oaks from Lady Radcliffe £6 13 4.

Men's families in Germany.—Kornman's wife (as usual).*

Housekeeping—£19 17 4, and extras £3 11 0. The five copper-smiths in the masters' house £4 1 0.

George Lamplugh is presented with a cask of wine for his diligence and services to the business £1 0 1.

Ulrich Schlegel on his wedding† 10/-. 10 ells at 8d., linen for sheets for the married couple £2 4 8.

Lady K. Radcliffe buys copper pots 8/6.

Smelting.—As usual, with 13 Englishmen including Thomas Ried, £30 13 1½.

Smiths—£7 11 9. *Coppersmiths*—£13 0 7. Building £9 12 6.

NEWLANDS.—Work going on at *St. George and God's Gift*—£24 17 6.

CALDBECK.—Mine and stamp, tributers at the *Luck* and *St. Emanuel*, contract work by Ernwallner behind the Luck (hinder dem veldort beim Glück) and by Hans Erhart at *St. Elisabeth*.—£59 1 9½.

Net expenses of Holy Cross term £381 2 9½.

Sept. and October (K.)—Hans Mayr's indebtedness is made good £11. A carter was engaged at Augsburg and given 12 florins for travelling expenses, but disappeared; the sum is written off to the Travelling account until we hear further of him £2 5 0. Cipprian Schaller, engaged Aug. 24, 1575, at Augsburg, is given for travelling and pay £10 6 3; and to his wife

* Wolfgang Prugger's wife no longer receives money; it was found later that she had died and remittances had been sent notwithstanding.

† Ulrich Schlegel is evidently the William Slegell, Stegyll or Stedyll of the Crosthwaite Registers. He baptized a daughter Margaret 1566, and buried Janet 1566-7. He and Lussill (Lucille?) his wife baptized a son Ulrich 1570. His first wife must have died, for now he marries Janet Altorne of Portinsale, by whom he had a daughter Janet in 1576-7. "William" S. of Rogerside died 1594.

The first of these is the fact that the United States is a young nation. It is only about 150 years old, and its history is therefore a history of rapid growth and change. The second is the fact that the United States is a large nation. It covers a vast area of land, and its population is one of the largest in the world. The third is the fact that the United States is a diverse nation. It is made up of many different peoples, languages, and customs, and this diversity has been one of its strengths.

The fourth is the fact that the United States is a free nation. It is a land of liberty, where the rights of the individual are protected by the law. The fifth is the fact that the United States is a powerful nation. It has a strong military, a powerful economy, and a leading position in the world. The sixth is the fact that the United States is a nation of opportunity. It is a land where anyone can succeed, if they have the talent and the will. The seventh is the fact that the United States is a nation of hope. It is a land where the future is bright, and where the dreams of the people are being realized.

The eighth is the fact that the United States is a nation of progress. It is a land where new ideas are being born, and where the old are being discarded. The ninth is the fact that the United States is a nation of peace. It is a land where the people are free to live in harmony, and where the interests of all are being protected. The tenth is the fact that the United States is a nation of justice. It is a land where the law is supreme, and where the rights of the weak are being protected.

£5 18 1½, being 3½ florins a week up to Oct. 25; also cloth from Hari Fletscher for clothes to him 18/7.*

Bolton colliery as usual.—T. Bauman foreman; 519½ loads coal taken this term to Smelthouses and 152 to Caldbeck.—£16 18 1.

Wrought copper; Richard Dudley buys pots, value £6 15 10; Wm. Sanderson of Cockermouth £14 1 3; Sir Hari Corwin, 19/-; and Housekeeping account £1 3 9.—£23 2 2.

W. Prugger and 2 ironsmiths going to London £2 10 0.

Given to the coppersmiths for their "Lichtprat" as is their due 5/6. A workman with R. Ledes at Isel, cutting wood, 1/4. Glazier mending windows in house 2/6. Hari Schiper (? Shepherd), smelter, given on leaving 1/-. Brewer and maid for their beer, 14/-. 3 keys for the buttery and one for Schaller's room 8d. Our host at Kendal for his trouble with letters, etc., a copper kettle 3/4. Mr. Osborne (Asforen) copper pots sent him to London as samples £2 13 8. John Hutson for a field in which we graze cows 2/-, etc.

R. Ledes, Oct. 21, to Mr. Braddyll in Lanckhinshier, etc., £3 5 8.

Smelters.—T. Wallner, Stampfer, Schrid, Altschmer; R. Bank, caretaker, and 13 English labourers, etc., £29 9 5.

Smiths.—Kolseisen, Ringseisen and D. Waterson, £7 3 11.

Building.—W. Prugger and Mur; W. Fisher, H. Stanger, James Wud, Steffan Buser and a slater, working in copperbeaters' shop, a new refining furnace, etc. A log of oak bought from a farmer to cut boards from, 7/6. Locksmith for 11 small "Neiger" 1/-, and an iron bow to a saw, 6d. Carriage of 500 slates 3/-. Copper used to mend the gutters between the roofs at Smelthouses 2/6. Gawen Hari for 500 "eye stones," etc., for the refining furnace 16/8.—£20 12 0. Carriage of stone, 19 days, Midینگstet to Smelthouses £5 14 0; 2 days timber from Milady park and 1 day from Isel 18/-; 1 day sand from the bridge 6/-; 8 days collecting and taking to Smelthouses timber carried away by the floods £2 8 0.

NEWLANDS.—Hering and T. Fletcher. Contract at *St. George*, F. Wallner and H. Mosser. Tributing at *God's Gift*, Hegler.—£21 3 5.

CALDBECK.—F. Erhart, A. Reindl and H. Erhart; Nelle Judl (Nelly Youdal) caretaker, and English workmen, all on wages.

* Ciprian Schaller had assayed for the Company at Augsburg in 1566. He now comes to Keswick, falls ill and dies. The Crosthwaite Registers mention him as "Ciprian Shalmer," buried 1575.

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Tributers at the *Luck*.—Klockher, Schlegel, Buchberger, B. Mosser, £32 17 7; at *St. Emanuel*, Beckh and L. Prugger, £11 7 0. Contracts at the surface? (veldort) at the *Luck*, Ernwallner, and at *St. Elisabeth*, H. Erhart.—£75 14 6½.

Grasmere (nothing doing).—Ede Watson, caretaker, Oct. 30 for 1 year, 10/-.

Edward Braddyll paid (as part of £2500 loan from Queen Elizabeth) in 8 instalments and namely at Keswick, Carlisle, Penrith, at his own house [Whalley], by the bailiff of Haum [? Holm Cultram] at Lancaster and again by the Bailiff of Haum, £861.

Net expenses of All Saints' term £338 4 6¼.

London, Sept. 14.—Peter Osborn received on our account from Queen Elizabeth £830, balance of £2000. This £830 we lent her for a year at 10 per cent. according to a bond of the Company under the Common Seal. H. Loner received from P. Osborn (Ausporn) £300, and sent £200 to Keswick. Two dinners (Malzeit) to officers of the Tower when they received copper £1 4 6, and one to the customs officer who brought the £2000, 6/4; given to a customs officer, 5/-; boat twice to Westminster to get the money 2/-. Paid at L. S. Stamler's request in writing to John Walker and John Rudson,* Stamler to repay this to D. Hechstetter's maids, £5. Ciprian Schaller travelling expenses £2 10 0. Thomas Petter (? Potter) of Kendal on a note from D. Hechstetter £7 8 8. Advanced to John Grave £3. 2 reams paper 18/-.

Sept. 17, delivered at the Tower for Queen Elizabeth copper value £1211 18 1. Nov. 9, carriage of 33 loads copper to the Tower 16/6.

Nov. 9 (L.)—Alderman Duckett received from P. Osborne money he had lent to D. Hechstetter £50. Edward Elman received from P. Osborne money paid at my request to Alderman Duckett for Henry Fletcher of Cockermouth on a note from Lancelot Fletcher £30. R. Pratt, salary, £15. Self and Pratt riding to see Lord Treasurer 8/3.

Paid to Newman, goldsmith, 40/- for finding a bag of £200 which Mr. Osborne left with him; it was well sealed but the wax was broken. It has now come safely to hand, found by his servant, and Mr. Osborne says nobody has touched it, so I have

* Stamler had been paying peat and coal-carriers, since Reinbrun's death, but was now gone. He seems to have omitted to pay Walker and Ritson, who are paid by Loner (? in London, as some Dalesfolk, like old Nicholas Birkett, were occasionally in town), and Stamler hands the money to Ursula and the other maid in Germany.

the following cases: (1) a patient with a history of chronic alcoholism, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved; (2) a patient with a history of chronic alcoholism, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved; (3) a patient with a history of chronic alcoholism, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved.

The first case was that of a man, aged 45, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved. The second case was that of a woman, aged 35, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved. The third case was that of a man, aged 55, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved.

The first case was that of a man, aged 45, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved. The second case was that of a woman, aged 35, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved. The third case was that of a man, aged 55, who had been drinking heavily for many years, and who had been treated with various remedies, including opium, but who had not improved.

not ventured to press him or to make any difficulties about it. But it never came into my hands, and consequently it is not fair that I should be the loser in the matter. This must be written off to general expenses £2.

Things bought for Mrs. Hechstetter and M. Stainberger by account sent to them £35 12 9. Raphael, postmaster, letters £1 4 9.

John Grave, sent to Mr. Osborne at Court at Windsor (Winsaw) 5/- and travelling 10/-.

Keswick, December.—Bought from Lady K. Radcliffe a wood called Lonhet [Loanhead or Loning Head, now Crow Park] and Esmes [Esmess, now called Isthmus] in which are oaks, ashes and birches, £24.

Freight of 52 cwt. 38 lb. iron and rope sent by Loner, London to Newcastle, in 1573, 10/-, and wharfage and portorage 2/2.

Zipprian Schaller's wife in Augsburg £5 5 0. For him in his illness 2½ lb. almonds 2/6, and after his death 5 ells linen therewith or therein to bury him; and moreover since he came to Keswick 5½ weeks' board at Hochstetter's, at 5/-, £1 14 2; further expenses 4/-. Since his death his clothes have been sold, and after paying his debts there remains £1 9 0. His horse was sold to Christopher Maison £2 5 0.

R. Ledes, the Bailey and John Bulfeldt, breakfast and dinner and a quart of wine at Isel park, on business about wood, 2/-. Mr. Braddyll, his son and two others were here bringing money and had 3 dinners, one breakfast and 9 quarts of wine 14/-; coverings to 4 feather beds with bolsters and pillows [used by the party], to prevent their being spoiled, 4/10.

House furnishing.—12 ells coarse linen for married couples' sheets, 8/-; 8 ells linen for cushion covers, 8/-; 10 ditto for table napkins and 3 towels 13/4; 14 ditto for 2 table cloths 12/10; making 6 covers for bench cushions 2/- and linen to line them at 3/- each. Wooden trenchers and vessels 1/8.

Höchstetter's son is employed by the Company and for the first year he is promised his board, which from Sept. 10 to Dec. 24 at 5/- makes £3 15 0.

Bought from a Furness farmer a load and 3 bushels charcoal 4/1.

Kornman's wife in Germany £1 14 0.

Copper beaters used tallow 10/-, salt 2/-, hemp 9d., 8 files and sharpening 3 old ones 2/-. Coppersmiths used charcoal £2 13 8, peat 8/4, lime 1/-, and smiths' work, iron and steel for setting up the "hammer," £5 9 4. Given to the Bishop of Carlisle, copper pots value 7/6.

Workman thatching our old house, and straw, 3/1. Heightening the chimney to R. Ledes' room, so that no harm shall happen, 5/8.

R. Ledes paid Richard Wainwright for watching the wood at Isel, so that there may be no fear about it, 4/-.

Getting our little boat out of the water when the flood had sunk it, 6d.

Given to Gawen Hari for his services a kettle value 1/2.

R. Ledes, taking a letter to Lord Scrope's deputy 3/2; he paid to one who brought a letter from Mr. Braddyll asking us to go to Lancaster to get money 5/8. He and J. Grave spent, Dec. 8 to 12, in getting the money, including present to one who rode with them from Lancaster to Kendal £1 11 6; hire of horse and man from Kendal to Keswick, 1/4; ditto Lancaster to Kendal 2/10; shooing 9d. R. Ledes going to Carlisle Assizes about people who carried off iron from Caldbeck 9/7.

Hans Merer entered Wilum Dofferi [? Dockwray] and party as creditors for £1 13 3 for carrying ore from Caldbeck. Now Gawen Youdal and Wilum Jefferi, according to Reinbrun's books, are debtors for £4 2 10, and though there is a serious difference between Dofferi and Jefferi, Hans Merer has assumed that it is the same name; and he has written off Dofferi's debt, which is really owing to him, as Jefferi's debt that is owing to us, which ought not to be put to his credit. This will have to be rectified when Jeffery and Youdal pay up.

Smelting—£35 0 3. *Smiths*—£9 4 9. *Building*—£35 0 3.

NEWLANDS.—Ordinary expenses, and Reindl and Ernwallner working at the *Vogelgsang* (Bird's song) on wages; at *St. George* F. Wallner and H. Moser; at *God's Gift*, Hegler.—£26 0 11.

CALDBECK.—F. Erhart, foreman, wages £4, and for extra work £3. At the *Luck*, Clockher, Schlegel, Buchberger and H. Mosser, £37 15 6. At *St. Emanuel*, Beckh and L. Prugger. At the Veldort at the *Luck*, Ernwallner. Under the Veldort at *St. Emanuel*, H. Erhart. Caretaker, Nele Judal.—£77 10 8½.

Copper sold this term £1622 14 10.

Net expenses of Christmas term £325 2 10.

(Signed) ULRICH FRASS.

Received at Augsburg, March 6, 1576.

The first of these was the discovery of gold in California in 1848. This discovery led to a great influx of people to California, and the state became a great center of population. The second was the discovery of gold in Nevada in 1859. This discovery led to a great influx of people to Nevada, and the state became a great center of population.

The third was the discovery of gold in Colorado in 1858. This discovery led to a great influx of people to Colorado, and the state became a great center of population. The fourth was the discovery of gold in Idaho in 1860. This discovery led to a great influx of people to Idaho, and the state became a great center of population.

The fifth was the discovery of gold in Montana in 1862. This discovery led to a great influx of people to Montana, and the state became a great center of population. The sixth was the discovery of gold in Wyoming in 1869. This discovery led to a great influx of people to Wyoming, and the state became a great center of population.

The seventh was the discovery of gold in Utah in 1871. This discovery led to a great influx of people to Utah, and the state became a great center of population. The eighth was the discovery of gold in Arizona in 1876. This discovery led to a great influx of people to Arizona, and the state became a great center of population.

The ninth was the discovery of gold in New Mexico in 1878. This discovery led to a great influx of people to New Mexico, and the state became a great center of population.

The tenth was the discovery of gold in Texas in 1880. This discovery led to a great influx of people to Texas, and the state became a great center of population.

The eleventh was the discovery of gold in Oklahoma in 1889. This discovery led to a great influx of people to Oklahoma, and the state became a great center of population.

The twelfth was the discovery of gold in Kansas in 1890. This discovery led to a great influx of people to Kansas, and the state became a great center of population.

The thirteenth was the discovery of gold in Nebraska in 1891. This discovery led to a great influx of people to Nebraska, and the state became a great center of population.

The fourteenth was the discovery of gold in Missouri in 1892. This discovery led to a great influx of people to Missouri, and the state became a great center of population.

HANS LONER LEAVES THE BUSINESS, 1576.

THE *Keswick Journal* for this year, written throughout by Ulrich Frass, is not bound in vellum like the rest, but the sheets are merely sewn to two slips of parchment cut from a fifteenth century Latin law-book in black letter with headings rubricated. I give only extracts, omitting items already familiar :—

Keswick, Shrovetide.—Copper pots sold to Edward Walckher and others of Legborthwait in exchange for charcoal: £10 11 4; to John Buckhbar £8 14 1; to Milordt Ritzart Barens (Richard Barnes) Bishop of Carlisle £1 11 8; to Sir Hari Corwin £1 17 6; to Marx Steinberger £61 12 4.

Coppersmiths.—B. Kornman, M. Mosser, E. Waterson. Copper-beaters, Sebastian Schweitzer, Conrnat Zinnagl, Hannus Reinlians, Hanns Rossla (or Rössle), Casfer Strauss,—£21 7 10.

Charcoal delivered by W. Sanderson £5 0 4; E. Walker of Legborthwait £1 12 6; from Borrowdale 17/6; from Calgarth 11/8. Stonecoal from Bolton £4 12 0 and peat £59 19 8, lime 18/2.

Horses.—S. Kalcher and R. Bickland, carters, wages and sundries, £5 18 9. Oats from J. Dalston £9, and from J. Buckbar £6. Hay £2 18 0.

Smelting.—T. Wallner, Stampfer, Schrid, Altschmer; R. Banckh, M. Athaw, J. Preithwait, R. Bonting, T. Hottson, Artur Damson, Dick Fleming; Steben Buser, waller; Dobe (Toby) Banckh, Gawen Waterson. Stone from Borrowdale, grease and 4 copper moulds into which lead is cast.—£36 13 8½.

Smiths.—Kolseisen and Ringseisen; J. Japson, etc., £10 6 2.

Building.—W. Prugger, S. Mur; W. Fisher; a long copper pipe to carry water to the copper beaters' house £1 1 8.—£9 4 4.

Carriage of birches from Miladi's wood, £12 12 0.

NEWLANDS.—Hering, wages £5, and extra £3. Ernwallner and T. Fletcher on wages. Contract at *St. George*, F. Wallner and H. Mosser. Tributurs at *God's Gift*, Hegler and Reindl.—£33 0 1.

CALDBECK.—F. Erhart, foreman; Nele Judl, caretaker. Simon Scott and T. Barckher 2/- each for carriage. At the *Luck*, Clockher, Schlegl, Buchberger and B. Mosser £27 10 0; at *St. Emanuel*, tributer, Beckh; contracts, L. Prugger, H. Erhart, £47 14 9.

Net expenses of Shrovetide term £271 2 5.

Easter term (K.)—7 fother lead sold to Hari Flettscher £20, and interest on £127 10 9, £5; more lead £18.

Rent to Lady K. Radcliffe for meadows, Hedsmeir heds and the Bill, £15. The wood Lonhet (Crowpark) taken from her cut by J. Walker etc. £5 15 6, carried by Parseval Wud £4 2 6; coaled by H. Bolswordt etc. £6 12 0;=396 loads charcoal, value £16 10 0. J. Banekh of Keswick made and brought thence 23000 faggots (Borthen) to the masters' house, Smelthouses and Island,—the thousand reckoned at 10 hundred, and the hundred at 6 score,—at 5d. the hundred.—£4 5 10. Also J. Buckbar and Parseval Radlief made 10800 faggots. T. Bulfildt carried 8000 faggots to the Island at 16d. the thousand 10/8.

A pair "kruxen" (crooks?) for carrying stone 1/2.

Hering and Mur when they went to look for mines 1/-.

Clearing the bramble-bushes in the Island 3/4.

Hanns Stadler for bringing letters from London 6/-.

(Other accounts as usual.) Net expenses of term £221 12 0.

London, April 3.—Going with Mr. Needham on two occasions to see 2 mills, in view of building a "hammer" £2 2 4.

Bought through Geoffrey (Jofrai) Duckett from Mester Podrich (? Patrick) 20 tons iron at 20/-. Alderman Duckett paid on the balance for 500 cwt. copper £4 0 4 and lent me for daily expenses £20. Carriage of copper and a clock 6/8; mending a clock from Keswick 3/6.

A process against Mr. Lasson (? Lawson) on which account he must come up to London 6/8. Horse, to visit Mr. Alderman 2/6. Raphael postmaster, letters, £1 0 9.

Christof Schütz* £4 19 1; part of this repaid by Mr. Ausborn (Osborne) £3 1 7.

Paid on behalf of Hans Reinhans £1 2 6 and Hans Rössle 15/2; their expenses £1 12 6 and travelling £1 10 0.

2 ells canvas sent to Keswick as a sample 1/3. John Thorne of Kendal, carriage of 7 loads of copper pots £5 19 0. Freight of 6 cwt. 104 lb. copper from Newcastle by skipper Mossogof

* Christopher Schütz of St. Annenberg, Saxony, the manager of the Zinc Mining Company.

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(Musgrave) 3/-, unlading it from the ship at Wapping 8d.; the carter (Karman) for bringing it here 8d. A bundle of "Scherssa" steel sent to Keswick 30/-, and for breaking it up 8d. Mr. Kamb, 3 cwt. hops at 26/8. Two letters from Keswick 2/-. March 22, Robert Locker of Kendal, carriage of 896 lb. copper pots £3 12 0.

Paid for Lorenz Zoller (Zeller), coppersmith, to the skipper who brought him here 2/6; his expenses here 5/- and travelling to Keswick 12/-. Hans Stadler travelling on March 25 at Messrs. Haug & Co.'s request with a letter to Keswick £1 10 0.

R. Pratt, salary and loans £5 10 0.

H. Loner bought for self, Holland linen at 2/2 the yard; fine linen at 6/- and at 4/4,—£4 5 8.

X May 10.—Christopher Meisson (Mayson) brought 4 cwt. 48 lb. wrought copper. Hans Franck received £13 from H. Loner. W. Burd has received 161 cwt. 1 qr. 7 lb. copper, value £483 18 9, of which he has let us have £380; meanwhile the copper remains in his hands. I set down the balance, namely £103 18 9.

Keswick, Whitsuntide.—2 tuns of French wine from Hari Flettcher, to be paid in copper kettles £29.

Robert Kolingwodt (Collingwood), Jon Chandler and Wilum More have sold us wine, iron and tallow to be paid in copper kettles at 10d. the lb., and what they receive over and above the value of £6 5 11 they will repay in iron, tallow, etc., for which Mr. Anderson of Newcastle has become surety.

5 skip or 60 bushel malt from Richard Dutlj (Dudley) at 4/- the bushel, to be paid next Maria Madelena day [July 22].

9 hogsheads of beer supplied to the masters' house £4 10 0; Mrs. Hechstetter for housekeeping this term £17 15 0 in cash and wrought copper value 5/6. Ulrich Frass for men's board, Germans and English £65 11 0. Kornman's wife in Germany £1 9 9.

Total of wrought copper sold this term to H. Loner, W. Sander-son, J. Buckhbar, R. Ledes, Lady K. Radcliffe, Edward Walker and Co., Robert Collingwood, J. Chandler and W. Morre,—£54 3 6.

Coppersmiths.—Kornman, Mosser and Waterson; beaters, Schweitzer, Strauss, Zinnagel, Reinhannss, Rossla and Lorentz Zeller,—£17 18 8.

Travelling expenses of Jonas Schütz to London £1 8 3.

Sample of copper sent to Scotland 3/-. 3½ days' work carrying manure and straw to the Island £1 1 0.

Smelting.—£22 18 8. *Smithy.*—£4 3 2½. *Building.*—£8 1 7.

the first of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The second of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The third of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The fourth of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The fifth of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The sixth of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

The seventh of the year, the weather was very cold, and the wind was very strong, so that the ships were obliged to stay in the harbor, and did not venture out to sea until the middle of the month.

Handwritten text, likely a letter or document, enclosed in a rectangular border. The text is faint and illegible due to the quality of the scan.

Handwritten signature or name, enclosed in a rectangular border. The signature is stylized and appears to be "J. J. J." or similar.

NEWLANDS.—Hering, F. Wallner and H. Mosser at *Franckenstein* on wages 14/-, and tributing £8. Hegler tributing at *St. Lienhart*. In all 28½ kibbles raised, expenses £13 10 9.

CALDBECK.—F. Erhart. Nelle Schmidt,* caretaker. Contract at *St. Emanuel*, Prugger and Beckh. Sorters, Schlegel, B. Mosser, Klockher, Buchberger, Prugger, Beckh, Reindl and H. Erhart. Day labourers, P. Schmidt, H. Penson, W. Carius, J. Dixon. Carriers, T. Barekher, M. Deneson. At the stamp, Ernwaller.—£31 9 5½.

Net expenses of Whitsuntide term £258 18 6½.

The list of Debitores includes "Milordt Wilum Burtle" (Burghley) £3125 6 5¼, Mathio Field £90 0 10 and other English sharcholders totalling £17561 3 2½. Other debitores include Robert Kolingwodt & Co. £12 7 5. The creditores are Haug and Co., £9268 10 7½; Queen Elizabeth, £2634 17 11; Benedetto Spinola, £1274 18 9; Hari Corwin, £72 19 1; D. Hechstetter, £200, etc.

Keswick, St. James' day.—Paid John Braunrickh (Brownrigg) bailiff of Maderthal (Matterdale) for his master's peat ground, Karl Moss, 9/8. Rup Schrid† for taking letters to London 1/-.

Smelting.—T. Wallner, Stampfer, Altschmer, Ringseisen, Hegler, and English labourers—£28 10 9.

NEWLANDS.—Hering and Hari Fischer; sorter, T. Fletscher, £5 16 5¼.

CALDBECK.—F. Erhart; Nelle Schmidt. At the *Luck*, Reindl, H. Mosser, Wallner, Cristl Burdin, W. Carius; at *St. Marx*, the same; at the stamp, Schlegel, B. Mosser, Klockher, Buchberger, L. Prugger, Beckh, H. Erhart, Ernwaller and S. Mur, all on wages.—£36 17 9.

London account.—Loner paid Hans Reinbrun's tailor 3/8. Lorentz Zeller travelling from Keswick 3/-.

French account.—John Casse paid for copper sent to Bordeaux February 1574, £376 7 0; expenses of sending, customs, etc., £47 3 10½.

Payments this term for copper and lead £1471 17 4.

Net expenses £248 2 8¼.

Keswick, Holy Cross day.—D. Hechstetter's brother, Jahem‡

* She must be the same Nelly Youdal, perhaps after marrying Peter Smith, who is still working at Caldbeck.

† He seems to be going back to Germany. In the Crosthwaite Register is the baptism, 1576, of Fabyane, son of Rupp Shrite and Agnes Reed.

‡ Joachim (p. 1); John Hechstetter, brother of Daniel, has been also mentioned.

Hechstetter, paid in 1575 at Augsburg and Antwerp for the coppersmiths and Ciprian Schaller sent here, £64. Haug & Co. paid to the 3 coppersmiths, L. Zeller, Hans Rein* and Hans Rossle for travelling expenses £8 6 9.

John Gree (Grave) our messenger, going with Hechstetter to London, and from April 7 to Aug. 14, expenses, £4. Hechstetter bought paper, wax and string 1/4; watch dog 2/4; 2 brass taps for the house 1/4. Keep of Jonas Schutz at Keswick, 17 weeks, £3 8 0. Hechstetter travelling to London 13 days, and 3 days lying ill £3 7 6. To Greenwich and Westminster, 9/10. 3 months with another person at the Windmill [inn], board, £3 5 4; room and fire there 109 days at 3d., £1 7 3; horse-keep there, Ap. 29 to Aug. 6, £5 7 11; and given there "zur Lechen" 2/-. Shoosmith and saddler 6/2. Back with another person to Keswick, £2 10 4. For M. Steinberger in London £1 5 5. For Steffan Kalcher 1/-. R. Ledes' board, 1 year to July 28, £13. His son Emanuel Hochstetter's keep, Dec. 24 to Sept. 10 at 5/-, £9 5 0.

Housekeeping :—Linen for sheets, 36 ells at 16d., 6 ells at 1/-, 10 at 5d., and 12 at 6d. Two tin dishes 1/8; a fish well 1/-; wooden dishes, piggins and bowls 2/2; chest, chair and bedstead 14/4.

Salt, vinegar, etc., for the coppersmiths 5/11.

Gentlemen and noblemen coming here with their servants on business, Christmas to Aug. 25, £5 9 8.

Boy Cristl, £1. Fire† in the stable, brandy, wax and alum for horse medicine, 2/10. Canvas and coarse thread to mend horse-collars 2/4.

Aug. 6, Robert Kolingwodt paid R. Ledes at Newcastle cash £6 5 5. C. Fanginger, his wife and child, spent in Newcastle 3/4, and paid a skipper to take them to Handburg (Hamburg) 26/8.

R. Ledes to Carlisle assizes, Aug. 12-15, 9/10, and to Lancaster assizes, Aug. 19-24, to prosecute farmers and colliers in debt to us, 13/6. To the advocate for 3 "protests" against 8 colliers who owe £31 9 10, £1 1 5. Aug. 31, riding to the Bishop 1/7, and horse 1/6; shocing 6d.

Paid Mr. Philipson of Calgarth the cost incurred some time ago for making and hanging a gate to his wood, for use of the [charcoal] carriers, and for building up walls which the colliers have broken in various places 5/-.

* Previously named Hans Reinhans.

† "In Stall den feuer Leiten geben."

Lady K. Radcliffe received cash from M. Steinberger £2, and lead, value 3/6. Edward Walker of Legborthwait has delivered charcoal £4 8 10, and takes copper pots £3. Mr. Sandes delivered 46 loads charcoal £5 7 4. Charcoal from Borrowdale £3 18 2, and from Furness 10/6.

Smelting—£33 4 3 $\frac{3}{4}$. *Smithy*—£4 4 8. *Building*—£14 5 11.

Coppersmiths, £17 4 2. Sir Hari Corwin paid for copper £5.

NEWLANDS.—£4 5 8. CALDBECK.—*St. Marx* going on slowly, nothing doing at the *Luck*, £48 3 5.

Net expenses of the Holy Cross term £433 12 2 $\frac{1}{4}$.

London, Aug. 31.—Wrought copper bought by Henrich Ludwig £77 14 3 $\frac{1}{2}$ of which he has paid £53 12 0. Alderman Duckett has sold copper kettles etc. for £5 17 6. Loner has sold to Mr. Mallein (or Maldin), coppersmith, 55 lb. sheet copper at 9d. £2 1 3; and to Mr. Look for the Muscovite Company, 27 kettles and 2 sheets, £4 10 0. Kettle sold through Ulrich Schlosser £1 1 7; also two pots and a kettle £2 6 7. To Willum of the Windmill, 2 pots 6/3.

Given to Hans Radermacher, a pot and a tinned kettle; to Meladi Duckett, 2 kettles and 2 pots; to Jafrai (Geoffrey) Duckett, a pot; to Mr. Pradt, a pot; to Mr. Nidham, a pot.

Sept. 12.—Sold to Richard Adams, copper pots, £11 18 4. Chris. Maison, carriage of copper £3 16 6. 4 pieces of copper £2 6 11. Caspar Hertz for groceries bought by Hechstetter £3. 2 $\frac{1}{2}$ sacks kelp I bought here, washed, sifted, packed and sent by Newcastle, 6/10. Going to court several times with Pradt and Hechstetter £2 2 0. Mr. Winebanck (Windebanks?), clerk to the signet, for writing a warrant, 5/-. 3 horses, to visit Lord Treasurer 12/-. Raphael, postmaster, for letters, 19/6. Taking wrought copper to Mr. Alderman, thence to Southwark 1/4, and taking the copper in my house to Southwark several times 2/-.
X

D. Hechstetter and J. Grave 48 days here at 2/4, £5 12 0; and while he was with Mr. Pratt 44 days at 2/4, £5 2 8. Paid Mr. Peel at St. Katharine's [inn] for Lorentz Zeller 2/4. Horses and expenses when we set Mr. Daniel on his way 9/-.
X

Gave R. Martin to hasten cash payment 10/-. Painting a copper plate for Lord Treasurer with vermilion 1/4.

Sept. 15.—Delivered to R. Martin 30 lbs. silver and received payment £91 9 11.

Rolland Relten, coppersmith, bought copper pots £58 2 9, of which he paid in cash £15 7 3.

Keswick, All Saints day.—Milordt Rizart Barens (Richard

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Barnes) Bishop of Carlisle, for services rendered his debt for wrought copper is written off,—£1 11 8.

Grasmere :—Nothing doing; caretaker, Ede Watson, wages for the year 10/-.

Bolton colliery. 32 loads coal 16/- and wages of T. Bauman, foreman, 14/-.

Wrought copper sold to E. Walker of Legborthwait, W. Sanderson, R. Dudley, Edward Heyss, and "a great brewing-kettle to a nobleman named Mr. Daton."—£30 8 10.

Queen Elizabeth paid Mr. Richard Dudley, Oct. 13, for copper £1200. Sir Hari Corwin bought copper £60; Edward Heis *ditto* £111. Hari Flettscher bought 1 fother lead £6 10 0.

Hechstetter with 3 others to Widob (Wythop) to see about wood, 3/8.

Coppersmiths.—Kornman, Melcher Mosser, Ede Waterson; copper-beaters, Strauss, Schweitzer, Zinnagel, Hans Rein and Hans Rossle.—£17 19 5.

Smelters.—T. Wallner, Stampfer, Altschmer, Ringseisen, Hegler, W. Prugger at the refining. R. Banekh, watchman. T. Ried and Steffan Buser getting stone in Borrowdale. Robert Bunting at work with the smelters; Hari Stanger, Artur Damson, Thomas Ried at the refining. Working at the coal, etc., E. Gasgel, W. Althaw, Hue Gasgel, W. Grieg, Cristl Reven (Raven)—£41 18 8.

Building.—Steffan Mur, Wm. Fischer, James Wud, Steffan Buser, Robert Agriegg (Grigg). James Wilson got together [for carrying] 480 logs of timber in Widob (Wythop) bought from W. Sanderson.—£9 6 6.

Smiths.—Kolseisen, Gawen Waterson,—£5 6 6.

Lime for the crushing mill, refining furnace and smelting, 61 loads at 2½d.

Charcoal from W. Sanderson 10½ loads, from E. Walker 7 loads; from Borrowdale 29½ loads; from Furness 16 loads.—£7 7 0. Omitted last term 134 loads from various places.—£15 11 8.

Peat, 2618 loads,—£44 12 8.

NEWLANDS.—Hering and T. Fletscher (the latter sorting and carrying ore from the *Franckenstein* to the sorting-place at *God's Gift*)—£3 16 11.

CALDBECK.—(Same men at wages, 9/- a week.) "Ele Judl," caretaker. Contract at *St. Marx*, F. Wallner and H. Moser, £8 12 0. In all, £44 2 4.

Net expenses, £290 19 10½.

Keswick, Christmas.—The account of Easter term 1571 with

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the Earl of Northumberland for wood in the Vorbarckh (Fawe park) was never settled.* We now write off the balance to his brother—£5 6 8.

Mrs. Hechstetter's account ; spent for noblemen and gentlemen coming here on business, Aug. 25 to Dec. 29, £1 14 10.

William Stob taking 400 kibbles of ore by water from the Vorbarckh to Midingstett at 4/- the long hundred, and 100 kibbles from Newlands to the Vorbarckh ; also 432 kibbles Newlands to Smelthouses at 3 for 8d. ; and 120 kibbles of "Schlich" and "Kerren" ore Caldbeck to Smelthouses at 6d. 20 ells coarse twill for sacks, 10/-.

[Usual entries for stonecoal, beer, malt, tallow, wine, etc.]

Coppersmiths as before, including £2 10 0 in presents, "considering that their weekly wages have not been paid regularly, and to make them more diligent."—£28 19 1.

Humfri [Bolsworth], collier, a gift 1/4.

Writing paper, 3 diaries (Schreib Kallender) and blotting powder 5/9. 20 oz. aquafortis for assays 3/4.

P. Radclieff, bailey, board of Jonas Schütz £1 4 0.

Horses.—Kalcher and Bickland, carters. Veterinary surgeon for a carthorse, to heal a bad foot, 6/-. Etc.—£13 3 4.

Smelters—£43 13 1¼. *Building*—£7 13 3½.

NEWLANDS.—Hering (now working alone) sorted 52 kibbles of ore, £7.

CALDBECK.—F. Erhart, foreman. Nelli Schmidt, caretaker. On wages at the *Luck* and *St. Marx*, Reindl at 8/-, Ernwallner at 7/-, F. Wallner, H. Mosser, H. Erhart, at 5/6 each ; Nicl Jaxen, J. Haggrieg, J. Dixen, W. Carius, T. Flettcher, Cristl Burtin, Adam Wilumson, H. Penson, P. Schmidt and Tobc Hutsison at 7d. a day. Tributing at the *Luck*, Klockher, Schlegl, Buchberger, B. Mosser, £9 4 2 less £3 advanced last Christmas, but add £38 8 0 for sorting, less deductions for Shrovetide and Easter £42 ; leaving them £2 12 2. Also tributing at the *Luck*, B. Mosser and L. Prugger £10 16 8 ; Klockher and Beckh, £13 ; Schlegel and Buchberger £12 10 0. Contracts at *St. Emanuel*, H. Erhart and Ernwallner £5 10 0 ; same men with F. Wallner, £6 4 2. Contract at *St. Marx*, F. Wallner and H. Mosser £4 10 3¼. J. Dixen carried ore to the stamp, £1 5 0. J. Haggrieg and J. Dixen sorted with Reindl, £5 17 4. J. Haggrieg some time ago sorted 16 kibbles ore from Wythburn, 6/8.—£75 5 7.

* Thomas Percy, Earl of Northumberland, fled to Scotland after the Rising of the North in November, 1569. After two years' imprisonment at Lochleven Castle he was sold by Morton to Queen Elizabeth, and beheaded at York.

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Robert Kolingwodt has paid cash to R. Ledes in Newcastle
£6 2 0.

Received [during 1576 ?] for copper, silver and lead, £3919 18 8½.

Net expenses of the Christmas term £280 0 9.

(Signed) ULRICH FRASS.

It will be noticed that the mining expenses are now reduced. Sorting only goes on at Newlands, and little more at Caldbeck. Smelting employs some of the miners, and others are found occupation at building and carting, while the manufacture of copper pots, though wages have not been paid regularly, gives some hope of keeping the business alive.

Hans Loner's accounts in London were made up on October 12th, 1576, by the addition of a large number of items relating to earlier transactions, for the most part without date, and of little interest for our purpose, though no doubt they would afford valuable material for a commercial history of Haug & Co.'s affairs.

Together with the papers is the draft or copy of a long statement by Loner, addressed to the City Council of Augsburg, by way of defending his character and actions. In it he replies to the charges:—

- i.—That he had sent no accounts ;
- ii.—That he had been dealing without the knowledge and consent of the English shareholders ;
- iii.—That he had not maintained the confidence of the English by giving accounts and information about the business ;
- iv.—That he had misapplied deposits of money “ and that there is no end to my wrong dealings ” ;
- v.—That he did not sell the copper ; and
- vi.—That he had not put an end to, or retrenched, the building at the mines.

On this last count he puts the blame on Hechstetter ; and whatever may have been said at the time, Hechstetter was ultimately justified by the continuance and com-

parative success of the mines ; though we seem to read, between the lines of the accounts, the story of an imperious character doing business in a lordly way, and spending money like water. Loner had a difficult task, if he was expected to control " Mr. Daniel."

There is no date to this paper. It refers to the end of 1571, but its half title is : " H. Loner's answer against his *former* employers, the Haug Co.," and, therefore, it must have been written about the end of 1576, when his accounts come to an end with the summaries already mentioned, concluding thus :—

Receipts in London, Dec. 31 1570 to Sept. 30 1576, £23658 19 5½

Expenditure	<i>ditto</i>	23091 13 1¾
—	spent on my own maintenance ..	563 6 3¾
		£23658 19 5½

Further, Messrs. Haug & Co. owe me for 6½
years' services at 1000 florins yearly .. 6500 florins.
And for maintenance at £200 a year .. 6825 —

13325
Already deducted for maintenance £563 6 3¾ = 2938 8

Leaving Messrs. Haug & Co. in my debt .. fl. 10346 12

(Signed) HANNS LONER.

Facing page 95 is a reproduction of this entry and signature.

THE END OF HAUG & CO.'S CONTROL, 1577.

FOR 1577 we have only two parts of the Keswick "Journal." The Shrovetide accounts are missing; those for Easter and Whitsuntide are grouped together, and St. James' Day term is the last for which we find a record. I propose giving all items of local and social interest a little more fully than in the last few years.

Keswick, Feb. 16 to May 25.

Bought from Lancelot Fletcher, 2 oxen, £6 13 4. A sum of £5 13 4 owing to a miner named Hans Hamel, now dead and without assigns, is made over to Fletcher as interest on £58 2 8 which he lends us to St. Bartholomew's day [Aug. 24].

Bought from Simon Wolsson and partners a piece of coaling wood named Loder Barekh (? Lowther park*) £4, and Dierbarekh (Deer park) with all charcoal and wood in it £40; also Hüchackh (? High-hagg) from which can be made 200 loads of charcoal £6 13 4, part to be paid in copper and part cash in instalments.—£50 13 4.

Sold to Wilum Hodgson, Hue and Niclas Wud and partners all our young oaks in Deerpark £20; they to fell and coal them within 3 years and carry the charcoal, according to their bond, from Mayday to Michaelmas, 10 loads a week more or less at 8d. a load delivered at Smelthouses.

Bought from Gawen Pirckhet 94 great and small timber trees, to be paid in instalments £30.

Deposited on going to Germany by Jeorg Reihel £3 10 0 and by Lienhart Diringer £4 8 0, to be paid by us on their return.

Friderich Schwarz, debtor for £1 9 7, and Ziprian Schaller for £3 7 7½.

Since Wolff Prugger came to Keswick to July 23, 1575, there had been deducted from his pay for his wife in Germany £73 13 9; but on March 3, 1577, information came from Schwatz

* Described later as "in Wythop."

THE HISTORY OF THE UNITED STATES OF AMERICA

THE HISTORY OF THE UNITED STATES OF AMERICA, FROM THE FIRST DISCOVERY OF THE CONTINENT TO THE PRESENT TIME. BY JAMES MADISON, ESQ. VOLUME THE FIRST. NEW-YORK: PRINTED BY J. B. ALLEN, 1791.

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that his wife had received up to Aug. 21, 1574,* not more than £56 12 6. We put to his account the balance £17 1 3.

Rent to J. Bulfildt, room for R. Ledes, dining-room and stable; and to J. Fisher, house in Newlands, $\frac{1}{2}$ year, £2 9 0.

Wages, U. Frass $\frac{1}{2}$ year £17 10 0; Chris. Buckle and Nane Stockthal, £6 10 0.

Tallow bought, 92 lb. at 3d., £1 3 3.

Ore carried, Vorbarekh to Midingstett, $2\frac{1}{2}$ long hundreds of kibbles, 5/10.

Peat; J. Braunrickh, bailey of Madardal, for his master's moss £3.

Stonecoal; T. Bauman, foreman at Bolton, wages £1 8 0. Carriage of $24\frac{1}{2}$ horseloads 12/3; and 5 horseloads bought, 2/6. From Sibenseid 45 horseloads delivered at Sinelthouses at 7d., £1 6 3.

Beer; from Robert Dalston 20 skep malt; from Chris. Thwait 180 lb. hops at 7d. Brewer and maid, allowance for ale £1 8 0. Workman at the Island helping with loads 5/-.

Beer drunk by workmen £20 0 2; in masters' house, 21 hogsheads 11 pots £10 15 6.

Workmen's board £92 6 3. Mrs. Hechstetter's housekeeping £26 3 6.

Wine drunk in the house 90 quarts £1 10 0, and in entertaining gentlemen £1 10 1. Other expenses in entertaining visitors, Dec. 29 to May 25, £1 10 0. A pack-saddle 2/-.

Summonses to York served on farmers who will not pay, £1 8 5. Writing various English letters on business 2/9. Given to one who engaged a collier 2/6. Copper pot given to Mr. Braddyll 6/8.

U. Frass travelling 2/2. Emanuel Hochstetter riding to Lancashire to Mr. Heess (Hayes) to get payment of a debt £1 9 7.

Horses; S. Kalcher at 8/- a week, R. Bickland and Hari Stanger at 3/- each. Oats, straw, hay; clearing the Bill (Bell) and Hettsmeir (Headsmire), etc.—£19 12 5.

Wrought copper sold £378 19 9. Lancelot Fletcher, through his brother Robert, took copper in part payment, £13 11 0.

Coppersmiths.—B. Kornman at 9/-, M. Mosser at 5/-, E. Waterson at 3/-. Copperbeaters; S. Schweitzer, C. Zinnagel, H. Rein, H. Rossle, C. Strauss, at 5/8 each. A. Ringseisen making copper nails at 9/-. Artur Damson helping in copperbeaters' house. Emanuel Hochstetter our carrier, with man

* The date of her death?

1. The first part of the paper is devoted to a general discussion of the problem of the origin of life. It is shown that the problem is not only a scientific one, but also a philosophical one. The scientific aspect of the problem is concerned with the question of how life arose from non-life. The philosophical aspect is concerned with the question of whether life is a necessary part of the universe or whether it is a mere accident.

2. The second part of the paper is devoted to a discussion of the various theories of the origin of life. These theories are divided into two main groups: the theory of spontaneous generation and the theory of biogenesis. The theory of spontaneous generation is the older of the two and is based on the idea that life can arise from non-life. The theory of biogenesis is the newer of the two and is based on the idea that life can only arise from pre-existing life.

3. The third part of the paper is devoted to a discussion of the evidence for and against the theory of spontaneous generation. It is shown that there is a great deal of evidence in favor of the theory of spontaneous generation, but that there is also a great deal of evidence against it. The evidence in favor of the theory of spontaneous generation is based on the fact that life has been found to arise from non-life in a number of different circumstances. The evidence against the theory of spontaneous generation is based on the fact that life has never been found to arise from non-life in a controlled experiment.

4. The fourth part of the paper is devoted to a discussion of the evidence for and against the theory of biogenesis. It is shown that there is a great deal of evidence in favor of the theory of biogenesis, but that there is also a great deal of evidence against it. The evidence in favor of the theory of biogenesis is based on the fact that life has never been found to arise from non-life in a controlled experiment. The evidence against the theory of biogenesis is based on the fact that life has been found to arise from non-life in a number of different circumstances.

5. The fifth part of the paper is devoted to a discussion of the various theories of the origin of life. These theories are divided into two main groups: the theory of spontaneous generation and the theory of biogenesis. The theory of spontaneous generation is the older of the two and is based on the idea that life can arise from non-life. The theory of biogenesis is the newer of the two and is based on the idea that life can only arise from pre-existing life.

6. The sixth part of the paper is devoted to a discussion of the evidence for and against the theory of spontaneous generation. It is shown that there is a great deal of evidence in favor of the theory of spontaneous generation, but that there is also a great deal of evidence against it. The evidence in favor of the theory of spontaneous generation is based on the fact that life has been found to arise from non-life in a number of different circumstances. The evidence against the theory of spontaneous generation is based on the fact that life has never been found to arise from non-life in a controlled experiment.

7. The seventh part of the paper is devoted to a discussion of the evidence for and against the theory of biogenesis. It is shown that there is a great deal of evidence in favor of the theory of biogenesis, but that there is also a great deal of evidence against it. The evidence in favor of the theory of biogenesis is based on the fact that life has never been found to arise from non-life in a controlled experiment. The evidence against the theory of biogenesis is based on the fact that life has been found to arise from non-life in a number of different circumstances.

8. The eighth part of the paper is devoted to a discussion of the various theories of the origin of life. These theories are divided into two main groups: the theory of spontaneous generation and the theory of biogenesis. The theory of spontaneous generation is the older of the two and is based on the idea that life can arise from non-life. The theory of biogenesis is the newer of the two and is based on the idea that life can only arise from pre-existing life.

9. The ninth part of the paper is devoted to a discussion of the evidence for and against the theory of spontaneous generation. It is shown that there is a great deal of evidence in favor of the theory of spontaneous generation, but that there is also a great deal of evidence against it. The evidence in favor of the theory of spontaneous generation is based on the fact that life has been found to arise from non-life in a number of different circumstances. The evidence against the theory of spontaneous generation is based on the fact that life has never been found to arise from non-life in a controlled experiment.

10. The tenth part of the paper is devoted to a discussion of the evidence for and against the theory of biogenesis. It is shown that there is a great deal of evidence in favor of the theory of biogenesis, but that there is also a great deal of evidence against it. The evidence in favor of the theory of biogenesis is based on the fact that life has never been found to arise from non-life in a controlled experiment. The evidence against the theory of biogenesis is based on the fact that life has been found to arise from non-life in a number of different circumstances.

and 4 horses spent in taking a great kettle to Lancashire 14/6. etc.—£39 5 3.

Charcoal from Widob (Wythop) 50 loads at 2/7; from Borrowdale 13 loads at 2/4; from Legborthwait, 10 loads at 2/4.—£9 2 10.

Peat; 3426 loads at 4d.—£57 2 0. Lime, 2 loads, 5d.

Expenses of charcoal made at Esnes ["Isthmus," as called at present], T. Ried, J. Walckher, S. Buser and others felling the oaks, cutting and bringing to coal pit (Koll bit), tying into bundles and delivering the "borthen" at Midingstett, all at their own cost, £7 6 0. Richard Weinwricht, coaling, £2 3 4. J. Buckbar taking 130 loads charcoal from Midingstett to Smelthouses £1 3 4; also some from Widob, 5/-. Wilum Hodgson, Niel Wud and others, cutting a piece of wood in Widob called Loder barekhi, 15/-.

Smelters—£32 6 7. Smiths—£11 13 8. Building—£17 9 2.

NEWLANDS.—Hering, foreman, at 10/-. Ernwallner, H. Erhart and Reindl, 14 weeks at 7/- each, and 7 weeks 1½ days at 5/6 at the *Weinreben* (Grapevine), at *St. Reichart* and above Littleton (Litel Duns), hewing 45 kibbles pyrites ore £6 19 0½. English labourers, Tomas Flettscher, Wilum Griegg and Hari Fischer, 68 shifts at 6d. at the Grapevine, etc. J. Bucklbarr carrying 4 horseloads stonecoal from Smelthouses, and ore back, 2/-. Given to a farmer, Cristoffer Boner, for finding the mine at *St. Reichart* 2/6. J. Fisher Lowschnap (of Low Snab) for carrying 120 loads peat to the Company's house, £1 15 0.

Contracts at the *Grapevine* at *Furdermuss* adit:—B. Moser and A. Reindl, 2 fathoms £5. Contract at the *Grapevine* at the "Veldort" (surface?), B. Moser, 1 fathom and 4 kibbles ore £4 16 4. Contract at the *Grapevine* at *Furdermus* adit, Reindl, 1 fathom £3 5 0.

Tributing at the *Grapevine*, F. Wallner and H. Moser £14 12 0, less £14 advanced last term; at *ditto*, F. Wallner, H. Moser, C. Klockher, L. Prugger and C. Beckh, 365 kibbles massy pyrites ore, £55 15 0; at *St. Reichart*, Hegler and Kalcher £10.—£98 13 10½.

CALDBECK.—F. Erhart, foreman, £7. Nelle Schmidt 14/- . U. Schlegl, S. Buchberger and H. Erhart, 3 weeks 5 days at 5/6 on wages. English labour; P. Schmidt, H. Penson, W. Carius, J. Moss and J. Haggrieg, 48 shifts at 6d. Contract at *St. Marx*, H. Erhart has hewed out 2 fathoms overhead (im hengenden) £2. Tributing at the *Luck*; U. Schlegel and S. Buchberger £40 11 3. Sorters; J. Haggrieg and J. Dixon have sorted 82

kibbles granulated lead ore (ganz plei keren), 24 kibbles lead ore (ganz plei stueff), 18 kibbles copper ore, and 658 kibbles Kolbenpruch, and carried 571 kibbles of Kolbenpruch to the Stamp, £1 15 8½. Carriage of stonecoal 3/9, of wood 1/8. Locksmith for the "Rebkessel" and mending a saw-blade 3/3.—£63 10 10½.

Bad debts: the following are dead, and their debts are written off to General Expenses;—Thomas Mackherel, Roland Walckher, Ede Wilumson of Milbeckh, Edward Kaulinson, Hari Locher, Roger Inginthwaite, Wm. Griegg, Robert Kneip, Hue Standle (Stanley), Richard Judl (Yondal), Peter Nicolson, collier; Thomas Gesling, collier; Nickas Braun [collier]; Richard Birekhet, John Gottier [collier], Jeorg Hassel [collier], Wilum Leowadt, Michel Bul, John Scott, John Peolfeldt, Richard Arras [collier], Richard Judl (Yondal) and partners, Wilum Fliming,* Wilum Westeral, John Rützon, James Dixon.—£51 7 3½.

The following have been sued for debt and are bound to pay in a year's time:—John Beckh of Crostwait, Edward Wilson of Weiborn (Wythburn), Wilum Jefferi and Gawen Judel (£4 2 10), Thomas and John Pill (Peel).—£19 14 1.

Sir Simon Musgraff owes, but will not acknowledge, a debt of £7 5 3. [The total of workmen's debts is now reduced to £18 10 3.] Net expenses of 2 terms £439 16 4½.

(Received at Augsburg, Aug. 18, 1577.)

Keswick, St. James' day. May 25 to July 27.

Edward Hees (Hayes) pays the balance of his debt for copper £60. John Wilson, shopkeeper, has been repaid his loan of Feb. 15, £60.

Daniel Hechstetter to York and London with 2 others £4 18 0, at the Windmill (inn) and Stonehouse, 8 weeks 4 days £20 5 4, and back £3 9 0. He received from Richard Martins, balance of account for silver £7 19 8 and from Radermacher £30; from a coppersmith named Marx Bindeman for copper £3; and for wrought copper £8 5 1. He bought steel 2 cwt. 14 lbs. £3 12 0, and hops 2¾ cwt. 5 lb., part payment £2 16 0; and paid Hari Dosson a debt to Robert Damson, butcher, £7 0 9. R. Ledes received in London £1 11 6; spent there for M. Steinberger 4/7. Bond relating to sale of lead and silver 2/6; copy of the Queen's warrant from the Exchequer 1/6. Shoeing horses 7/-. Letters from Keswick 1/6, and postage in London 2/8. Carriage of 2 valises, Ledes' books, etc., to Keswick 17/6. Mending saddle

* Not Mr. Fleming of Rydal. This man's debt is only 1/4.

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1/- . Boat to Westminster 1/- . Paper, sealing wax and letter-thread 8/6 . A horse from Grasmere to Keswick 6d . Further expenses on 2 pieces silver already mentioned, 2/2 . John Hutson who rode with him to London £1 18 6 .

Casfer Herz in London [Loner's successor] received from Roland Rolten, coppersmith, £8 1 8 ; and from Hainrich Ludwig for Loner, £13 2 3½ . He spent :—R. Pratt's wages, £4 ; D. Hechstetter £1 14 6½ ; balance for the hops £1 2 10 ; for M. Steinberger 3/6 . Rent to H. Ludwig for a store-room for copper £1, and for setting to rights certain pots crushed in transit from Keswick 5/- . Notary for making out bonds on sales 2/- . Letters 5/4 ; Raffiel, postmaster, 19 oz. letters at 6d., 9/6 . Paper, wax, thread and ink, 3/- . His own board, 6 months at 1/- a day £8 8 0 ; his room and washing 19/- . Taking 2 parcels of steel to ship 3d . Given to the old father at the postmaster's 10/- . Paid on behalf of Loner a " Subsidy or tax " £1 14 0 ; and further, to avoid the same charge on himself 7/- .

Marx Steinberger has lent D. Hechstetter to pay various debts (Rolten, Ernwaller, F. and H. Erhart, Beckh, Klockher, G. Birkhet and Simon Wolson for wood, L. Fletcher, Lady Radlieff, etc.) £304 . In return it is promised to let him have 95 cwt. wrought copper at 64/- the cwt. [=£304], but if any one on the Company's side is dissatisfied with this agreement, he will be content with £290 10 0 [in cash] together with interest and expenses .

Interest account owes D. Hechstetter one year's interest on £290 8 0 [put into the business] £29 1 0 .

Cash owes George Lamplugh for 5 bushel rye at 6/4, 14 bushel wheat at 9/-, 24 bushel barley at 5/- and 24 bushel oats at 2/8 ; and to Richard Dudley, 5 bushels wheat at 6/8, to be put to the account of workmen's board .

Rent to Parseval Radlieff, bailey, for 1 year, house and cellar 10/-, stable £1 6 8, and hay loft, 15/- .

Bartlme Kornman's wife, £4 13 6 .

Lead : Lancelot Fletcher has received 3 fother 94 lb. at £6 10 0 the fother, including 20½ cwt. which " Miledi Aschgle " * has received . Sold through Steinberger to Mr. Bickering, 4 cwt. 98 lb.—£1 18 1½ .

Wood sold at Isel to T. Barchher and James Scott £3 .

Old horse sold to a workman £1 .

Stonecoal, 5 skep sold, 5/- .

* ? Lady Askew of Seaton .

To the officers who manage the peat moss called Karl Moss, for the pasture (Bastert) or grazing (Waid), by reason that the farmers have stacked 8800 loads of peat there and carried them away, trampling the pasture with their horses, and paid nothing for it: so we have had to put this right with the officers ourselves, and for every long hundred to pay 4d., which we are to deduct from the farmers' pay, £1 9 4.

Bolton colliery: T. Bauman, foreman, at 2/- a week; carriage of 42 peck (beekh) stonecoal to Smelthouses at 1d.—£1 1 6.

Beer.—Carriage of 21 bushel malt from Mr. Dalston 3/6. Brewer and maid, allowance for beer 18/-. Nane Stockthal, 6 weeks wage and board 12/-. Carriage of 2½ cwt. hops from Newcastle, 6/-. Beer drunk by workmen this term £9 10 11, and in masters' house, 15 hogsheads 3 pots at 10/-.

Board of workmen, German and English, £28 4 1. Mrs. Hechstetter for housekeeping £6 9 2½. R. Ledes £1. M. Steinberger £2 9 11½.

General expenses.—Wm. Hottson, taking letter for Mr. Braddyll to Penrith 1/- . Copper pots for house, 5/-. Robert Fletcher taking letter to York 6/8. R. Ledes and another to Cockermouth 1/- . Paid a goldsmith who exchanged broken groats ("grat," silver 4d. pieces) for others on several occasions 1/8.

Horses.—R. Bickland and Hari Stanger, carters, at 3/- a week. 24 bushels oats from Mr. Lamplugh 3/4.

Bad debts written off to general expenses; Felix Wallner, £7 18 6½; Lienhart Prugger, £14 4 4½.

Wrought copper sold this term at Smelthouses £176 12 1; and sent to Henry Anderson in Newcastle £20 8 0.

Coppersmiths.—Bartelme Korninan 2 weeks at 9/-. Melcher Mosser 9 weeks at 9/-. Sebastian Schweitzer 9 weeks at 7/-. Ede Waterson 9 weeks at 4/-. Copperbeaters:—Connrat Zinnagel, Hanns Rein, Hanns Rossle, Casfer Straus, all 9 weeks at 5/8. Wilum Athaw, working in the "hammer" and beaters' house £1 13 3. Carriage of pots to London 18/-.—£24 12 11.

Charcoal used by the copper smiths £3 10 0; iron, £1 6 11.

Carriage.—Charcoal delivered at Smelthouses from Widob, 224 loads; from Sanderson 65 loads; from Borrowdale 29 loads, from Legborthwait 14½ loads. Peat, 800 loads. Lime, 128 loads. Stonecoal, 12 loads 3½ bushel.—£29 14 9.

Charcoal burning, Ede and Hue Gassgel and Steffan Busser carried to the coalpit (kollbü) wood for 130 loads at Loderbarekh [Lowther park in Wythop] 13/9. Richard Weinwright (Wainwright) coaling, 10/-. Wm. Hottson, Tobie Huthison, Nicl

and Hue Wodd and others carried and coaled 131 loads in Loderbarekh and 63 loads in Hiehackh (Highhagg) £8 1 8. Carrying to Smelthouses £6 9 4.—£15 14 9.

Smelters.—T. Wallner, foreman, at 13/6, and extra for making 165 cwt. copper £2 1 3. U. Stampfer at 9/- and extra £1 10 11½. H. Altschmer at 9/- and extra £1 10 11½. Gilg Hegler at 9/-. John Prethwait 11/8, and extra for helping with the 165 cwt., 10/4. Robert Banckh, caretaker at 4/- and extra for helping with the pulverising 6/-. English labourers; Artur Damsen, smelting, £1 7 11. T. Reed 17/9, J. Banckh 18/8, W. Griegg £1 4 9, Hue Gassgel 17/6 and Ede Gassgel 17/6 stoking, etc. The Bailey [P. Radcliffe], balance for birchwood 3/4. Grease, 2½ lb. at 10d.—£28 14 4½.

Building.—Steffan Mur, carpenter at 8/-.

Smiths.—Peter Kolseisen at 10/-. Gawen Waterson at 3/-. Old iron returned by miners, £3 10 4. Carriage of 2 cwt. 14 lb. steel from Newcastle, 4/-.—£9 11 4. Stonecoal used, 9 loads at 4/-. Iron from smithy used by miners £1 9 4½ and smiths' work 4/6. Nails used in building at Smelthouses, 650 at 16d. the hundred. Smiths' work on horses and carts, 46 lb. iron at 2½d. At Caldbeck 200 nails at 16d. At Newlands, work 15/7 and steel 1/8.

Horses.—Work in Mylady's wood at 6/- a day, £3 12 0. Carrying wood for smelters £1 10 0, and to the house £1 4 0. Also 5 days with 4 horses at 2/6 a day "umb Koren gefaren" (? to fetch a cart). Carrying 8 loads stonecoal Smelthouses to Newlands 2/-. 23 loads Bolton to Caldbeck 6/2; and 2 loads charcoal Wythop to Smelthouses 1/4. Carrying ore to Smelthouses, 8 kibbles from Newlands 2/-, 14 kibbles from Caldbeck 6/-. Carrying beer to Caldbeck, 9½ loads, and empty casks back 13/9; to the house from Midingstett 9/-.—£9 5 9.

Charcoal used in roasting, smelting and coppering, 121½ loads at 2/4; peat *ditto* 1100 loads at 4d.

NEWLANDS.—Hans Hering, foreman, at 10/-. C. Klockher, C. Beckh, H. Mosser, F. Wallner, L. Prugger, and B. Mosser at the *Grapevine* on wages at 5/6. A Reindl 2 weeks at 8/-. T. Flettscher, C. Burtin, J. Normant, and J. Japson, 32 shifts at 6d. Tributing at the *Grapevine*, H. Moser and S. Kalcher raised 50 kibbles pyrites ore at 2/-, less expenses in iron £1 11 1 and assistant 2/6. At *St. Reichart*, G. Hegler and S. Kalcher raised 80½ kibbles pyrites ore at 3/4, less advances £10, iron 2/4 and assistant 2/6. Sorters: T. Fletscher, J. Normant, and C. Burtin sorted 50 kibbles ore at 3d. at the *Grapevine* and 100½ at *St. Reichart*. Hering sorted 9 kibbles.—£19 13 11½.

CALDBECK.—Fabian Erhart, foreman, 4 weeks at 10/-. Nelle Schmidt, caretaker, 9 weeks at 1/-. Sorters, U. Schlegl and Simon Buchberger at 7/-. John Moss, John Dixon, John Haggrieg, Peter Schmidt and others, 45½ shifts at 6d., and 2 at 7d and 11 at 4d., and with the peat, 6 shifts at 6d. Tributing : at the *Luck*, U. Schlegl and S. Buchberger, 460 kibbles, £15 6 8, less deductions £13. John Haggrieg and J. Dixon have sorted 54 kibbles " ganz plei stueff " (lead ore), 115½ kibbles " Kerren " (granulated ore), 11½ kibbles copper ore, and 604 kibbles Kolbenpruch : they get 6d. a kibble for ore and 2d. for " pruch "—£9 11 2 ; and they have carried 404 kibbles kolbenbruch to the Stamp at ¾d., £1 5 3,—£10 16 5 of which their assistant gets £3 15 6.—£23 8 8.

Net expenses of the term £222 12 2¾.

The list of debtors and creditors totals £15687 19 10¾, of which Haug & Co. are creditors for £10916 0 6½.

Total assets in minerals etc., dated Aug. 13, 1577 :—Copper in Keswick 165 cwt., in London and Newcastle, 64 cwt. 31 lb. ; in France, 19 cwt. 76 lb. ; in the coppersmiths' workshop 55 cwt. 84 lb. ; wrought copper in London and Newcastle 20 cwt. 8 lb. Lead, 4 cwt. 32 lb. Copper pyrites ore, 4796 cwt. 86½ lb. ; " Schliffer arzt," 8530 cwt. ; pyrites schlich, 288 cwt. 79 lb. Lead ore, " schlich " and " keren," 1805 cwt. 109 lb. Bought lead ore 450 cwt. Caldbeck " kolbenbruch," 11052 cwt. 7 lb. ; common " Kolbenbruch," 73030 cwt. 104 lb. Iron and steel, 18 cwt. 87 lb. Tallow, 1 cwt. 74 lb. Charcoal, 128 loads. Stone-coal, 3 loads 3½ bushels. Peat, 370½ loads. Lime 197½ loads. Sackcloth, 3 ells.

(Signed) ULRICH FRASS.

An extract from the Smelting book, kept by Mark Steinberger, follows, giving statistics of minerals in hand in a tabulated form, and the book concludes with a note by Hechstetter that " of the manufactured copper in hand, as aforesaid, Steinberger claims, as can be seen in the accounts, 95 cwt." (Facsimile opposite reading as follows :—)

von dem Restierennden gemechten Kupffer wie hievor
vermelt wollen gehörn dem Steinperger wie es in der
Rechnung zusehen ist 95 centner.

DANIEL HECHSTETTER.

Although it is not intended in this volume to give a history of the Mining Company, the reader who has followed the fortunes of Mr. Daniel and his party so far may reasonably ask for the end of the story, for we leave them at a crisis. From various sources* we gather that Hechstetter struggled on for a few years, but by 1578 found it necessary to propose that the shareholders should provide £1000 for working expenses, or else leave him to work the mines with his own partners. He died in 1581. Mr. Scott says that another German firm made an offer, in the belief that they could extract three times as much copper from the ore as Hechstetter got ; and we find elsewhere that in 1581 George Needham brought Joachim Gans to Keswick with proposals for a reform at Smelthouses. But this came to nothing. Meanwhile Customer Thomas Smyth, one of the shareholders, took a lease of the Company's works, guaranteeing to pay the Queen's royalties and a dividend to the shareholders. The Cornish mines were then opened afresh, and Ulrich Frass was sent as manager to Treworth, near Perin Sands. We hear of him there in January, 1583-4, as ill in health, but "verye carfful and dylygent," and as revisiting Cumberland in the summer of 1585. By this time Hans Hering had been to Neath in South Wales to report on the ores of that district, and in March, 1586, Ulrich Frass had lately been sent to Neath and a smelting-house had been set up there. Frass, improving on the invention of Joachim Gans, found it more profitable to smelt all sorts of copper ore together, and according to Sir Hussey Vivian (*Copper Smelting*, 1881), he introduced the process employed in South Wales up to modern times.

Mark Steinberger and Richard Ledes remained at Keswick, with Emanuel and the younger Daniel Hechstetter. For seven years Customer Smyth's enterprise

* Mr. W. R. Scott, *op. cit.*, Col. Grant-Francis, F.S.A., "The smelting of copper in the Swansea district" (ed. 2, 1881), and local notices.

prospered ; later it seems to have fallen off, and by 1597 the Keswick works were in difficulties again. The Company notified Steinberger, Ledes and Emanuel Hechstetter that it would hold them liable for Smyth's undertaking ; they replied that wet summers and want of peat had hindered the smelting, but there was plenty of copper at " God's Gift," and they only wanted means to continue operations. Some means were supplied, but it was believed that the Germans were not treating the Company honestly, and that they had kept the profits to themselves. To this they answered that they had laid down their own money, and their losses were not " fraudulend."

About this time the Coniston mines, already known though but little worked, were taken in hand with the help of Allan Nicholson. The earliest mention of them in the *State Papers* appears to be the letter of 1605 ; but the Registers show that German miners were here in 1599. In 1600 an inquiry into the condition of the Northern mines showed that in 36 years, after paying £4,500 to the Queen, £68,103 had been made by the sale of metal, and the expenses had been £104,709 *plus* a capital outlay of £27,000. Nearly all that money, found and lost by Augsburg and London merchants, had been lavished on the dales. How otherwise could one understand the prosperity in the seventeenth century of a district so infertile and remote ?

In 1604, James I. granted a charter confirmatory to the Company, including the names of Emanuel and Daniel, sons of the late Daniel Hechstetter. The Keswick mines survived them both, though Joseph, son of Emanuel, lived to see the wreck of the Smelthouses, which he managed in his turn, at the Civil Wars. It is usually said that this was perpetrated in 1651 by Cromwell's army on the march from Edinburgh to Worcester. But General Lambert's troops took Penrith in June, 1648,

and Colonel Ashton's forces came in September of that year to raise the siege of Cockermouth Castle. There were several opportunities, without laying the usual blame on Cromwell, for Parliament men to attack the headquarters of a royal monopoly. How far it deserved attack is quite another matter.

ADDITIONAL NOTES.

Pages 24, 32. The "chapel" must mean "furnace," see p. 68 *note*. There is no evidence that the Germans had a place of worship or services of their own.

P. 78 *note*. Add "A Thomas Archer appears in the Penrith Register 1561 to 1567."

P. 95 line 7, for "brother Caspar" read "son George"; and p. 123 *note*, delete "young." Caspar Loner was apparently Haug's agent in London before Hans Loner settled there.

P. 114, line 4 from bottom, for "Burghley's secretary" read "Burghley the secretary."

*Grund der Reformation - gott dank
Johann Jörg Sob.*

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* "John Denton, the historian, was 36 at his father's death in 1584. His kinsmen, the Lamplughs, were sheriffs in 1571 and 1572. The historian was trained in the law, and would be old enough to act as under-sheriff in 1574. I do not know of another John Denton likely to fit the place and time." (Note by the Rev. James Wilson, Litt.D., Editor of the *Victoria History of Cumberland*.)

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† Hugh and John Allenson, of *Thornthwaite*, are described in the following year's list as of *Thornton* (p. 158), showing that —ton was sometimes used for —thwaite.

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